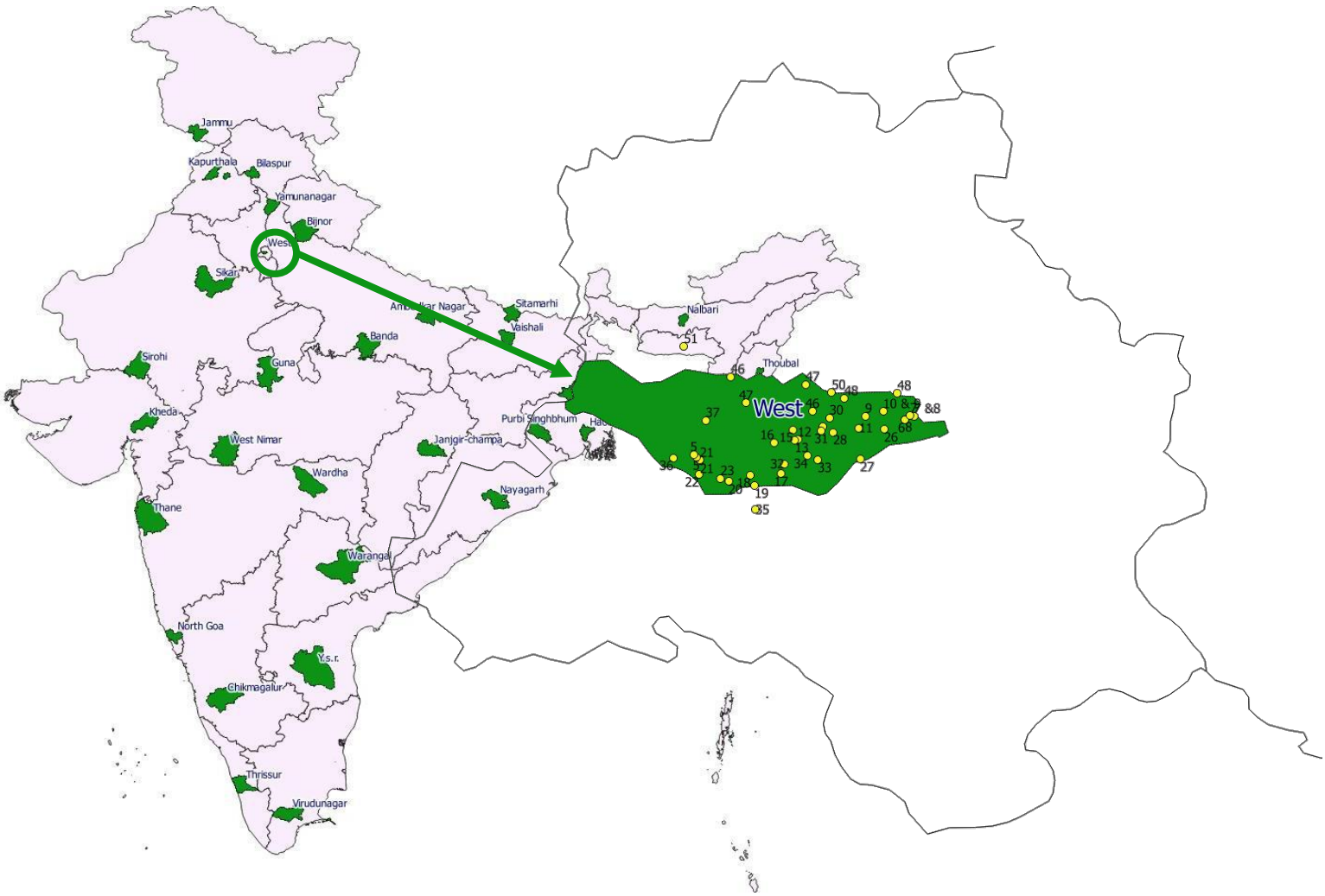
NPCB National Blindness Survey: 2015-2018

DISTRICT SUMMARY REPORT

West Delhi, Delhi



Community Ophthalmology

Dr. Rajendra Prasad Centre for Ophthalmic Sciences

AIIMS, New Delhi - 110029

NPCB National Blindness Survey: 2015-2018

DISTRICT SUMMARY REPORT

West Delhi, Delhi

April 2017

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RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

SUMMARY REPORT

Date and time of report: 11-Feb-16 3:18:34PM

This report is for the survey area: WEST DELHI

Year and month when survey was conducted: 2015- 9 until 2016- 2

This report shows the most important results from all the other reports. The 95% confidence interval (95% CI) is based on the sampling error in cluster sampling. More detailed information is provided in the other reports.

1. Eligible persons, coverage, absentees and refusals

	Examined		Not available		Refused		Not capable		Total	
	n	%	n	%	n	%	n	%	n	%
Males	1,095	83.1%	200	15.2%	18	1.4%	5	0.4%	**1,318**	**100.0%**
Females	1,587	93.7%	88	5.2%	17	1.0%	2	0.1%	**1,694**	**100.0%**
Total	**2,682**	89.0%	**288**	9.6%	**35**	1.2%	**7**	0.2%	**3,012**	**100.0%**

2. Age and gender distribution of people examined in the sample

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	515	47.0%	868	54.7%	**1,383**	**51.6%**
60 - 69 years	401	36.6%	507	31.9%	**908**	**33.9%**
70 - 79 years	141	12.9%	157	9.9%	**298**	**11.1%**
80+ years	38	3.5%	55	3.5%	**93**	**3.5%**
Total	**1,095**	**100.0%**	**1,587**	**100.0%**	**2,682**	**100.0%**

3. Sample prevalence of blindness, severe (SVI), moderate (MVI) and early (EVI) visual impairment - bilateral PVA

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Blindness	13	1.2 (0.6 - 1.8)	32	2.0 (1.3 - 2.7)	45	1.7 (1.2 - 2.2)
Severe VI	12	1.1 (0.3 - 1.8)	34	2.1 (1.4 - 2.9)	46	1.7 (1.1 - 2.3)
Moderate VI	79	7.2 (5.4 - 9.0)	121	7.6 (6.0 - 9.2)	200	7.5 (6.2 - 8.7)
Early VI	101	9.2 (7.5 - 10.9)	200	12.6 (10.4 - 14.8)	301	11.2 (9.5 - 12.9)
Functional Low Vision	7	0.6 (0.1 - 1.1)	26	1.6 (1.1 - 2.2)	33	1.2 (0.8 - 1.6)

4. Extrapolated magnitude of blindness, severe (SVI), moderate (MVI) and early (EVI) visual impairment - bilateral PVA

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Blindness	2,572	1.2 (0.6 - 1.8)	5,078	2.5 (1.8 - 3.2)	7,646	1.9 (1.3 - 2.4)
Severe VI	2,338	1.1 (0.4 - 1.9)	5,340	2.7 (1.9 - 3.5)	7,676	1.9 (1.3 - 2.5)
Moderate VI	15,310	7.3 (5.5 - 9.1)	17,009	8.5 (6.9 - 10.1)	32,313	7.9 (6.7 - 9.1)
Early VI	19,048	9.1 (7.4 - 10.8)	26,534	13.3 (11.1 - 15.5)	45,581	11.2 (9.5 - 12.8)
Functional Low Vision	1,400	0.7 (0.2 - 1.2)	4,315	2.2 (1.6 - 2.7)	5,714	1.4 (1.0 - 1.8)

5. Blindness prevalence (PVA<3/60 in better eye) by age group

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
50 - 59 years	2	0.4 (0.0 - 0.9)	5	0.6 (0.1 - 1.1)	7	0.5 (0.2 - 0.9)
60 - 69 years	5	1.3 (0.2 - 2.3)	10	2.0 (0.6 - 3.4)	15	1.7 (0.6 - 2.7)
70 - 79 years	4	2.8 (0.2 - 5.5)	5	3.2 (0.5 - 5.9)	9	3.0 (1.2 - 4.8)
80+ years	2	5.3 (0.0 - 12.0)	12	21.8 (12.2 - 31.4)	14	15.1 (9.1 - 21.1)
All 50+ years	13	1.2 (0.6 - 1.8)	32	2.0 (1.3 - 2.7)	45	1.7 (1.2 - 2.2)

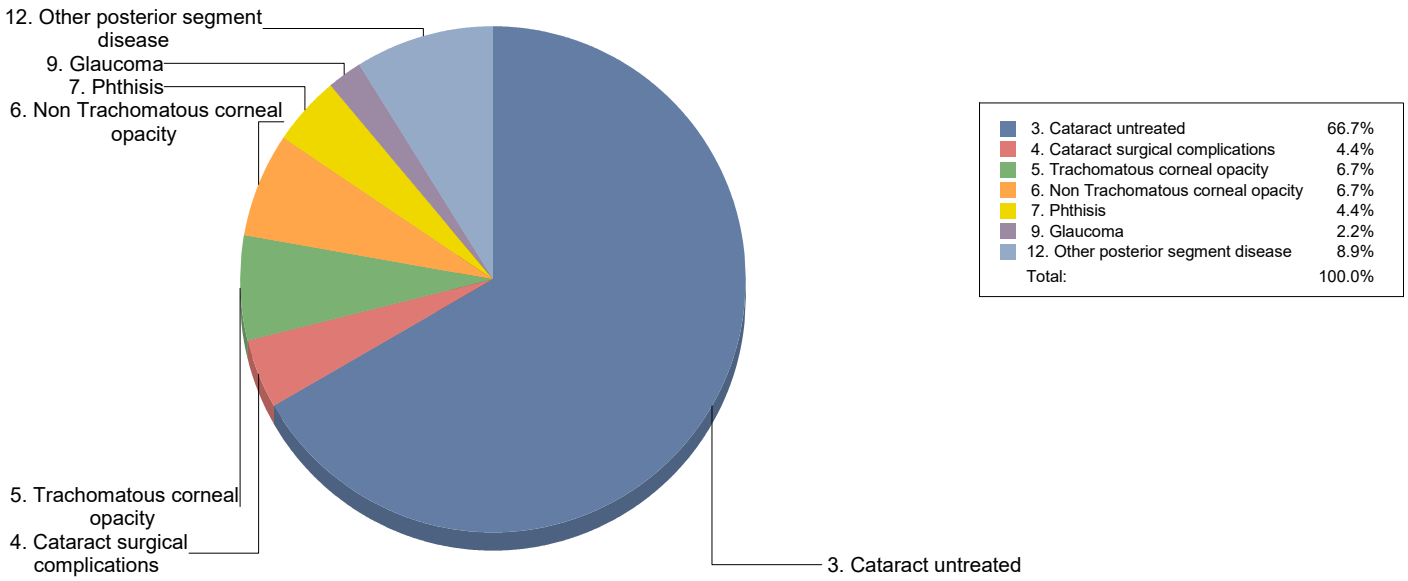
6. Principal cause of blindness, severe (SVI), moderate (MVI) and early (EVI) visual impairment in persons (PVA)

	Blindness		Severe VI		Moderate VI		Early VI	
	n	%	n	%	n	%	n	%
1. Refractive error	0	0.0%	3	6.5%	105	52.5%	250	83.1%
2. Aphakia uncorrected	0	0.0%	0	0.0%	0	0.0%	1	0.3%
3. Cataract untreated	30	66.7%	32	69.6%	73	36.5%	33	11.0%
4. Cataract surgical complications	2	4.4%	5	10.9%	12	6.0%	8	2.7%
5. Trachomatous corneal opacity	3	6.7%	1	2.2%	0	0.0%	0	0.0%
6. Non Trachomatous corneal opacity	3	6.7%	2	4.3%	2	1.0%	2	0.7%
7. Phthisis	2	4.4%	0	0.0%	0	0.0%	0	0.0%
8. Onchocerciasis	0	0.0%	0	0.0%	0	0.0%	0	0.0%
9. Glaucoma	1	2.2%	1	2.2%	2	1.0%	0	0.0%
10. Diabetic retinopathy	0	0.0%	0	0.0%	0	0.0%	1	0.3%
11. ARMD	0	0.0%	0	0.0%	1	0.5%	2	0.7%
12. Other posterior segment disease	4	8.9%	2	4.3%	5	2.5%	4	1.3%
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	**45**	**100.0%**	**46**	**100.0%**	**200**	**100.0%**	**301**	**100.0%**

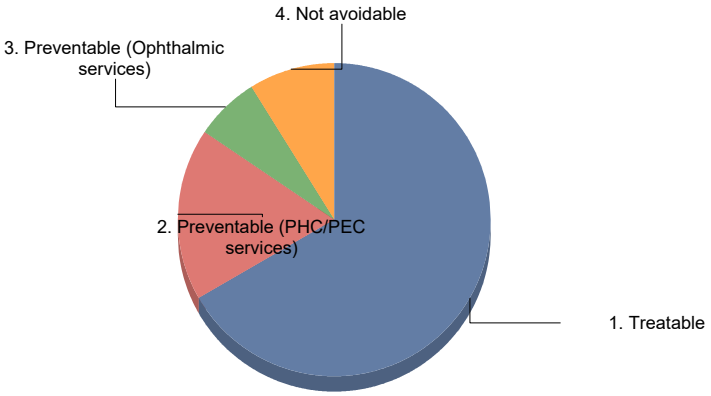
Blindness, SVI, MVI and EVI in persons by intervention category

A. Treatable (1,2,3)	30	66.7%	35	76.1%	178	89.0%	284	94.4%
B. Preventable (PHC/PEC services) (5,6,7,8)	8	17.8%	3	6.5%	2	1.0%	2	0.7%
C. Preventable (Ophthalmic services) (4,9,10)	3	6.7%	6	13.0%	14	7.0%	9	3.0%
D. Avoidable (A+B+C)	41	91.1%	44	95.7%	194	97.0%	295	98.0%
E. Posterior segment causes (8,9,10,11,12)	5	11.1%	3	6.5%	8	4.0%	7	2.3%

7. Graph: main cause of blindness in persons

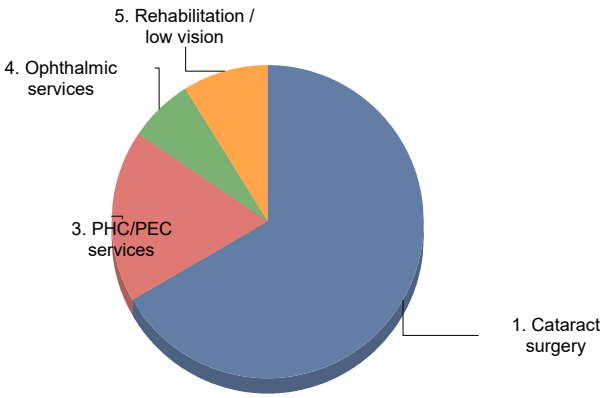


8. Graph: main category of blindness in persons



1. Treatable	66.7%
2. Preventable (PHC/PEC services)	17.8%
3. Preventable (Ophthalmic services)	6.7%
4. Not avoidable	8.9%
Total:	100.0%

9. Graph: action required to reduce blindness



1. Cataract surgery	66.7%
3. PHC/PEC services	17.8%
4. Ophthalmic services	6.7%
5. Rehabilitation / low vision	8.9%
Total:	100.0%

10. Cataract surgical coverage (persons) - percentage

	Males	Females	Total
VA < 3/60	97.9	95.9	96.6
VA < 6/60	94.6	93.7	94.1
VA < 6/18	82.2	82.9	82.7

11. Barriers to cataract surgery - bilateral VA<6/60 due to cataract

	Males		Females		Total	
	n	%	n	%	n	%
Need not felt	4	44.4%	2	12.5%	**6**	**24.0%**
Fear	1	11.1%	8	50.0%	**9**	**36.0%**
Cost	2	22.2%	2	12.5%	**4**	**16.0%**
Treatment denied by provider	2	22.2%	3	18.8%	**5**	**20.0%**
Unaware treatment is possible	0	0.0%	1	6.3%	**1**	**4.0%**
Cannot access treatment	0	0.0%	0	0.0%	**0**	**0.0%**
Local reason	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**9**	**100.0%**	**16**	**100.0%**	**25**	**100.0%**

12. Outcome after cataract surgery with available correction (eyes)

	Males		Females		Total	
	n	%	n	%	n	%
Very good: can see 6/12	236	69.6%	327	58.4%	563	62.6%
Good: can see 6/18	37	10.9%	90	16.1%	127	14.1%
Borderline: can see 6/60	42	12.4%	73	13.0%	115	12.8%
Poor: cannot see 6/60	24	7.1%	70	12.5%	94	10.5%
Total	**339**	**100.0%**	**560**	**100.0%**	**899**	**100.0%**

13. Outcome by type of cataract surgery with available correction (eyes)

	Non-IOL		IOL		Total	
	n	%	n	%	n	%
Very good: can see 6/12	14	30.4%	549	64.4%	**563**	**62.6%**
Good: can see 6/18	6	13.0%	121	14.2%	**127**	**14.1%**
Borderline: can see 6/60	8	17.4%	107	12.5%	**115**	**12.8%**
Poor: cannot see 6/60	18	39.1%	76	8.9%	**94**	**10.5%**
Total	**46**	**100.0%**	**853**	**100.0%**	**899**	**100.0%**

14. Cause of PVA<6/12 (good, borderline and poor outcome) after cataract surgery

	Selection		Surgery		Spectacles		Sequelae		Can see 6/12	
	n	%	n	%	n	%	n	%	n	%
Very good: can see 6/12	0	0.0%	0	0.0%	0	0.0%	0	0.0%	563	100.0%
Good: can see 6/18	12	18.8%	28	27.7%	80	58.0%	7	21.2%	0	0.0%
Borderline: can see 6/60	18	28.1%	37	36.6%	49	35.5%	11	33.3%	0	0.0%
Poor: cannot see 6/60	34	53.1%	36	35.6%	9	6.5%	15	45.5%	0	0.0%
Total	**64**	**100.0%**	**101**	**100.0%**	**138**	**100.0%**	**33**	**100.0%**	**563**	**100.0%**

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

SAMPLE RESULTS - NOT ADJUSTED FOR AGE AND SEX

Date and time of report: 11-Feb-16 3:11:38PM

This report is for the survey area: WEST DELHI

Year and month when survey was conducted: 2015- 9 until 2016- 2

The sample size of the RAAB is sufficient to provide an acceptable accuracy of the overall prevalence of bilateral blindness (best corrected VA <3/60). The accuracy of prevalence estimates for any subgroup is far less and caution should be taken in the interpretation of these data.

1. Eligible persons, coverage, absentees and refusals in survey

	Examined		Not available		Refused		Not capable		Total	
	n	%	n	%	n	%	n	%	n	%
Males	1,095	83.1%	200	15.2%	18	1.4%	5	0.4%	**1,318**	**100.0%**
Females	1,587	93.7%	88	5.2%	17	1.0%	2	0.1%	**1,694**	**100.0%**
Total	**2,682**	**89.0%**	**288**	**9.6%**	**35**	**1.2%**	**7**	**0.2%**	**3,012**	**100.0%**

2. Prevalence of blindness, severe (SVI), moderate (MVI) and early visual impairment (EVI) - all causes

	Males		Females		Total	
	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)
Blindness - VA < 3/60 in the better eye with best correction or pinhole						
All bilateral blindness	10	0.9% (0.3-1.5)	26	1.6% (1.0-2.2)	**36**	**1.3% (0.9-1.8)**
All blind eyes	81	3.7% (3.0-4.4)	162	5.1% (4.3-5.9)	**243**	**4.5% (3.9-5.1)**
Blindness - VA < 3/60 in the better eye with available correction (presenting VA)						
All bilateral blindness	13	1.2% (0.6-1.8)	32	2.0% (1.3-2.7)	**45**	**1.7% (1.2-2.2)**
All blind eyes	103	4.7% (3.8-5.6)	197	6.2% (5.3-7.1)	**300**	**5.6% (4.9-6.3)**
Severe visual impairment (SVI) - VA<6/60 - 3/60 in the better eye with available correction						
All bilateral Severe VI	12	1.1% (0.3-1.8)	34	2.1% (1.4-2.9)	**46**	**1.7% (1.1-2.3)**
All Severe VI eyes	72	3.3% (2.3-4.2)	110	3.5% (2.6-4.3)	**182**	**3.4% (2.7-4.1)**
Moderate visual impairment (MVI) - VA<6/18 - 6/60 in the better eye with available correction						
All bilateral MVI	79	7.2% (5.4-9.0)	121	7.6% (6.0-9.2)	**200**	**7.5% (6.2-8.7)**
All Moderate VI eyes	234	10.7% (8.9-12.5)	340	10.7% (9.2-12.2)	**574**	**10.7% (9.4-12.0)**
Early visual impairment (EVI) - VA<6/12 - 6/18 in the better eye with available correction						
All bilateral EVI	101	9.2% (7.5-10.9)	200	12.6% (10.4-14.8)	**301**	**11.2% (9.5-12.9)**
All Early VI eyes	227	10.4% (8.8-11.9)	469	14.8% (13.1-16.4)	**696**	**13.0% (11.7-14.2)**

3. Prevalence of presenting VA<3/60, VA<6/60, VA<6/18 and VA<6/12 - all causes (cumulative categories)

	Males		Females		Total	
	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)
Blindness - VA < 3/60 in the better eye with available correction (presenting VA)						
All bilateral blindness	13	1.2% (0.6-1.8)	32	2.0% (1.3-2.7)	**45**	**1.7% (1.2-2.2)**
All blind eyes	103	4.7% (3.8-5.6)	197	6.2% (5.3-7.1)	**300**	**5.6% (4.9-6.3)**
VA<6/60 in the better eye, with available correction (presenting VA)						
All bilateral cases	25	2.3% (1.2-3.4)	66	4.2% (3.2-5.1)	**91**	**3.4% (2.6-4.1)**
All eyes	175	8.0% (6.6-9.4)	307	9.7% (8.4-11.0)	**482**	**9.0% (8.0-10.0)**
VA<6/18 in the better eye, with available correction (presenting VA)						
All bilateral cases	104	9.5% (7.3-11.7)	187	11.8% (10.0-13.6)	**291**	**10.9% (9.4-12.3)**
All eyes	409	18.7% (16.1-21.2)	647	20.4% (18.4-22.4)	**1,056**	**19.7% (18.0-21.4)**
VA<6/12 in the better eye, with available correction (presenting VA)						
All bilateral cases	205	18.7% (15.6-21.8)	387	24.4% (21.3-27.5)	**592**	**22.1% (19.4-24.7)**
All eyes	636	29.0% (25.8-32.3)	1,116	35.2% (32.3-38.0)	**1,752**	**32.7% (30.1-35.2)**

4. Principal cause of blindness in persons: VA<3/60 in better eye with available correction

	Males		Females		Total	
	n	%	n	%	n	%
1. Refractive error	0	0.0%	0	0.0%	**0**	**0.0%**
2. Aphakia uncorrected	0	0.0%	0	0.0%	**0**	**0.0%**
3. Cataract untreated	7	53.8%	23	71.9%	**30**	**66.7%**
4. Cataract surgical complications	0	0.0%	2	6.3%	**2**	**4.4%**
5. Trachomatous corneal opacity	0	0.0%	3	9.4%	**3**	**6.7%**
6. Non Trachomatous corneal opacity	1	7.7%	2	6.3%	**3**	**6.7%**
7. Phthisis	2	15.4%	0	0.0%	**2**	**4.4%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	1	7.7%	0	0.0%	**1**	**2.2%**
10. Diabetic retinopathy	0	0.0%	0	0.0%	**0**	**0.0%**
11. ARMD	0	0.0%	0	0.0%	**0**	**0.0%**
12. Other posterior segment disease	2	15.4%	2	6.3%	**4**	**8.9%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**13**	**100.0%**	**32**	**100.0%**	**45**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	7	53.9%	23	71.9%	30	66.7%
B. Preventable (PHC/PEC services) (5,6,7,8)	3	23.1%	5	15.6%	8	17.8%
C. Preventable (Ophthalmic services) (4,9,10)	1	7.7%	2	6.3%	3	6.7%
D. Avoidable (A+B+C)	11	84.6%	30	93.8%	41	91.1%
E. Posterior segment causes (8,9,10,11,12)	3	23.1%	2	6.3%	5	11.1%

5. Main cause of blindness in eyes - VA<3/60 with available correction, no pinhole

	Males		Females		Total	
	n	%	n	%	n	%
1. Refractive error	1	1.0%	1	0.5%	**2**	**0.7%**
2. Aphakia uncorrected	0	0.0%	2	1.0%	**2**	**0.7%**
3. Cataract untreated	53	51.5%	109	55.3%	**162**	**54.0%**
4. Cataract surgical complications	8	7.8%	18	9.1%	**26**	**8.7%**
5. Trachomatous corneal opacity	0	0.0%	8	4.1%	**8**	**2.7%**
6. Non Trachomatous corneal opacity	12	11.7%	19	9.6%	**31**	**10.3%**
7. Phthisis	6	5.8%	5	2.5%	**11**	**3.7%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	4	3.9%	6	3.0%	**10**	**3.3%**
10. Diabetic retinopathy	1	1.0%	1	0.5%	**2**	**0.7%**
11. ARMD	0	0.0%	0	0.0%	**0**	**0.0%**
12. Other posterior segment disease	10	9.7%	19	9.6%	**29**	**9.7%**
13. All other globe/CNS abnormalities	8	7.8%	9	4.6%	**17**	**5.7%**
Total	**103**	**100.0%**	**197**	**100.0%**	**300**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	54	52.4%	112	56.9%	166	55.3%
B. Preventable (PHC/PEC services) (5,6,7,8)	18	17.5%	32	16.2%	50	16.7%
C. Preventable (Ophthalmic services) (4,9,10)	13	12.6%	25	12.7%	38	12.7%
D. Avoidable (A+B+C)	85	82.5%	169	85.8%	254	84.7%
E. Posterior segment causes (8,9,10,11,12)	15	14.6%	26	13.2%	41	13.7%

6. Principal cause severe visual impairment in persons: VA<6/60 - 3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
1. Refractive error	1	8.3%	2	5.9%	**3**	**6.5%**
2. Aphakia uncorrected	0	0.0%	0	0.0%	**0**	**0.0%**
3. Cataract untreated	10	83.3%	22	64.7%	**32**	**69.6%**
4. Cataract surgical complications	0	0.0%	5	14.7%	**5**	**10.9%**
5. Trachomatous corneal opacity	0	0.0%	1	2.9%	**1**	**2.2%**
6. Non Trachomatous corneal opacity	1	8.3%	1	2.9%	**2**	**4.3%**
7. Phthisis	0	0.0%	0	0.0%	**0**	**0.0%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	0	0.0%	1	2.9%	**1**	**2.2%**
10. Diabetic retinopathy	0	0.0%	0	0.0%	**0**	**0.0%**
11. ARMD	0	0.0%	0	0.0%	**0**	**0.0%**
12. Other posterior segment disease	0	0.0%	2	5.9%	**2**	**4.3%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**12**	**100.0%**	**34**	**100.0%**	**46**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	11	91.7%	24	70.6%	35	76.1%
B. Preventable (PHC/PEC services) (5,6,7,8)	1	8.3%	2	5.9%	3	6.5%
C. Preventable (Ophthalmic services) (4,9,10)	0	0.0%	6	17.7%	6	13.0%
D. Avoidable (A+B+C)	12	100.0%	32	94.1%	44	95.7%
E. Posterior segment causes (8,9,10,11,12)	0	0.0%	3	8.8%	3	6.5%

7. Main cause of severe visual impairment in eyes - VA<6/60 - 3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
1. Refractive error	15	20.8%	12	10.9%	**27**	**14.8%**
2. Aphakia uncorrected	0	0.0%	1	0.9%	**1**	**0.5%**
3. Cataract untreated	44	61.1%	62	56.4%	**106**	**58.2%**
4. Cataract surgical complications	3	4.2%	18	16.4%	**21**	**11.5%**
5. Trachomatous corneal opacity	0	0.0%	1	0.9%	**1**	**0.5%**
6. Non Trachomatous corneal opacity	4	5.6%	5	4.5%	**9**	**4.9%**
7. Phthisis	0	0.0%	0	0.0%	**0**	**0.0%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	1	1.4%	2	1.8%	**3**	**1.6%**
10. Diabetic retinopathy	2	2.8%	1	0.9%	**3**	**1.6%**
11. ARMD	0	0.0%	0	0.0%	**0**	**0.0%**
12. Other posterior segment disease	3	4.2%	8	7.3%	**11**	**6.0%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**72**	**100.0%**	**110**	**100.0%**	**182**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	59	81.9%	75	68.2%	134	73.6%
B. Preventable (PHC/PEC services) (5,6,7,8)	4	5.6%	6	5.5%	10	5.5%
C. Preventable (Ophthalmic services) (4,9,10)	6	8.3%	21	19.1%	27	14.8%
D. Avoidable (A+B+C)	69	95.8%	102	92.7%	171	94.0%
E. Posterior segment causes (8,9,10,11,12)	6	8.3%	11	10.0%	17	9.3%

8. Principal cause moderate visual impairment in persons: VA<6/18 - 6/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
1. Refractive error	42	53.2%	63	52.1%	**105**	**52.5%**
2. Aphakia uncorrected	0	0.0%	0	0.0%	**0**	**0.0%**
3. Cataract untreated	31	39.2%	42	34.7%	**73**	**36.5%**
4. Cataract surgical complications	3	3.8%	9	7.4%	**12**	**6.0%**
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	**0**	**0.0%**
6. Non Trachomatous corneal opacity	1	1.3%	1	0.8%	**2**	**1.0%**
7. Phthisis	0	0.0%	0	0.0%	**0**	**0.0%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	1	1.3%	1	0.8%	**2**	**1.0%**
10. Diabetic retinopathy	0	0.0%	0	0.0%	**0**	**0.0%**
11. ARMD	1	1.3%	0	0.0%	**1**	**0.5%**
12. Other posterior segment disease	0	0.0%	5	4.1%	**5**	**2.5%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**79**	**100.0%**	**121**	**100.0%**	**200**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	73	92.4%	105	86.8%	178	89.0%
B. Preventable (PHC/PEC services) (5,6,7,8)	1	1.3%	1	0.8%	2	1.0%
C. Preventable (Ophthalmic services) (4,9,10)	4	5.1%	10	8.3%	14	7.0%
D. Avoidable (A+B+C)	78	98.7%	116	95.9%	194	97.0%
E. Posterior segment causes (8,9,10,11,12)	2	2.5%	6	5.0%	8	4.0%

9. Main cause of moderate visual impairment in eyes - VA<6/18 - 6/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
1. Refractive error	131	56.0%	202	59.4%	**333**	**58.0%**
2. Aphakia uncorrected	0	0.0%	0	0.0%	**0**	**0.0%**
3. Cataract untreated	75	32.1%	85	25.0%	**160**	**27.9%**
4. Cataract surgical complications	18	7.7%	30	8.8%	**48**	**8.4%**
5. Trachomatous corneal opacity	0	0.0%	1	0.3%	**1**	**0.2%**
6. Non Trachomatous corneal opacity	3	1.3%	5	1.5%	**8**	**1.4%**
7. Phthisis	0	0.0%	0	0.0%	**0**	**0.0%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	2	0.9%	2	0.6%	**4**	**0.7%**
10. Diabetic retinopathy	0	0.0%	1	0.3%	**1**	**0.2%**
11. ARMD	2	0.9%	2	0.6%	**4**	**0.7%**
12. Other posterior segment disease	2	0.9%	11	3.2%	**13**	**2.3%**
13. All other globe/CNS abnormalities	1	0.4%	1	0.3%	**2**	**0.3%**
Total	**234**	**100.0%**	**340**	**100.0%**	**574**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	206	88.0%	287	84.4%	493	85.9%
B. Preventable (PHC/PEC services) (5,6,7,8)	3	1.3%	6	1.8%	9	1.6%
C. Preventable (Ophthalmic services) (4,9,10)	20	8.5%	33	9.7%	53	9.2%
D. Avoidable (A+B+C)	229	97.9%	326	95.9%	555	96.7%
E. Posterior segment causes (8,9,10,11,12)	6	2.6%	16	4.7%	22	3.8%

10. Principal cause early visual impairment in persons: VA<6/12 - 6/18 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
1. Refractive error	85	84.2%	165	82.5%	**250**	**83.1%**
2. Aphakia uncorrected	0	0.0%	1	0.5%	**1**	**0.3%**
3. Cataract untreated	13	12.9%	20	10.0%	**33**	**11.0%**
4. Cataract surgical complications	2	2.0%	6	3.0%	**8**	**2.7%**
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	**0**	**0.0%**
6. Non Trachomatous corneal opacity	0	0.0%	2	1.0%	**2**	**0.7%**
7. Phthisis	0	0.0%	0	0.0%	**0**	**0.0%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	0	0.0%	0	0.0%	**0**	**0.0%**
10. Diabetic retinopathy	1	1.0%	0	0.0%	**1**	**0.3%**
11. ARMD	0	0.0%	2	1.0%	**2**	**0.7%**
12. Other posterior segment disease	0	0.0%	4	2.0%	**4**	**1.3%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**101**	**100.0%**	**200**	**100.0%**	**301**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	98	97.0%	186	93.0%	284	94.4%
B. Preventable (PHC/PEC services) (5,6,7,8)	0	0.0%	2	1.0%	2	0.7%
C. Preventable (Ophthalmic services) (4,9,10)	3	3.0%	6	3.0%	9	3.0%
D. Avoidable (A+B+C)	101	100.0%	194	97.0%	295	98.0%
E. Posterior segment causes (8,9,10,11,12)	1	1.0%	6	3.0%	7	2.3%

11. Main cause of early visual impairment in eyes - VA<6/12 - 6/18 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
1. Refractive error	192	84.6%	383	81.7%	**575**	**82.6%**
2. Aphakia uncorrected	0	0.0%	0	0.0%	**0**	**0.0%**
3. Cataract untreated	24	10.6%	41	8.7%	**65**	**9.3%**
4. Cataract surgical complications	8	3.5%	26	5.5%	**34**	**4.9%**
5. Trachomatous corneal opacity	1	0.4%	1	0.2%	**2**	**0.3%**
6. Non Trachomatous corneal opacity	0	0.0%	3	0.6%	**3**	**0.4%**
7. Phthisis	0	0.0%	0	0.0%	**0**	**0.0%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	0	0.0%	0	0.0%	**0**	**0.0%**
10. Diabetic retinopathy	1	0.4%	0	0.0%	**1**	**0.1%**
11. ARMD	0	0.0%	4	0.9%	**4**	**0.6%**
12. Other posterior segment disease	1	0.4%	10	2.1%	**11**	**1.6%**
13. All other globe/CNS abnormalities	0	0.0%	1	0.2%	**1**	**0.1%**
Total	**227**	**100.0%**	**469**	**100.0%**	**696**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	216	95.2%	424	90.4%	640	92.0%
B. Preventable (PHC/PEC services) (5,6,7,8)	1	0.4%	4	0.9%	5	0.7%
C. Preventable (Ophthalmic services) (4,9,10)	9	4.0%	26	5.5%	35	5.0%
D. Avoidable (A+B+C)	226	99.6%	454	96.8%	680	97.7%
E. Posterior segment causes (8,9,10,11,12)	2	0.9%	14	3.0%	16	2.3%

12. Prevalence of cataract with VA<3/60, VA<6/60, VA<6/18 and VA<6/12 - best corrected VA or pinhole

	Males		Females		Total	
	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)
Cataract and VA<3/60 with best correction or pinhole						
Bilateral cataract	3	0.3% (0.0-0.6)	10	0.6% (0.3-1.0)	**13**	**0.5% (0.3-0.7)**
Unilateral cataract	31	2.8% (1.9-3.8)	63	4.0% (3.0-4.9)	**94**	**3.5% (2.8-4.2)**
Cataract eyes	37	1.7% (1.1-2.2)	83	2.6% (2.0-3.2)	**120**	**2.2% (1.8-2.6)**
Cataract and VA<6/60 with best correction or pinhole						
Bilateral cataract	8	0.7% (0.2-1.3)	16	1.0% (0.6-1.5)	**24**	**0.9% (0.6-1.2)**
Unilateral cataract	43	3.9% (3.9-6.5)	79	5.0% (4.8-7.1)	**122**	**4.6% (4.8-6.4)**
Cataract eyes	59	2.7% (1.7-3.7)	111	3.5% (2.9-4.1)	**170**	**3.2% (2.6-3.7)**
Cataract and VA<6/18 with best correction or pinhole						
Bilateral cataract	34	3.1% (1.9-4.4)	55	3.5% (2.4-4.6)	**89**	**3.3% (2.5-4.2)**
Unilateral cataract	87	8.0% (6.0-9.9)	126	7.9% (6.5-9.4)	**213**	**7.9% (6.7-9.2)**
Cataract eyes	155	7.1% (5.6-8.6)	236	7.4% (6.0-8.8)	**391**	**7.3% (6.1-8.4)**
Cataract and VA<6/12 with best correction or pinhole						
Bilateral cataract	49	4.5% (3.0-6.0)	76	4.8% (3.5-6.1)	**125**	**4.7% (3.6-5.8)**
Unilateral cataract	99	9.0% (7.1-11.0)	145	9.1% (7.7-10.6)	**244**	**9.1% (7.9-10.3)**
Cataract eyes	197	9.0% (7.4-10.6)	297	9.4% (7.8-10.9)	**494**	**9.2% (7.9-10.5)**

13. Sample prevalence of (pseudo)aphakia

	Males		Females		Total	
	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)
Bilateral (pseudo)aphakia	121	11.1% (8.3-13.8)	198	12.5% (10.7-14.2)	**319**	**11.9% (10.1-13.6)**
Unilateral (pseudo)aphakia	97	8.9% (7.1-10.6)	164	10.3% (8.5-12.2)	**261**	**9.7% (8.3-11.2)**
(Pseudo)aphakic eyes	339	15.5% (12.8-18.1)	560	17.6% (15.7-19.5)	**899**	**16.8% (15.0-18.6)**

14. Cataract Surgical Coverage

	Males	Females	Total
Cataract Surgical Coverage (eyes) - percentage			
VA < 3/60	90.2	87.1	88.2
VA < 6/60	85.2	83.5	84.1
VA < 6/18	68.6	70.4	69.7
Cataract Surgical Coverage (persons) - percentage			
VA < 3/60	97.9	95.9	96.6
VA < 6/60	94.6	93.7	94.1
VA < 6/18	82.2	82.9	82.7

15. Number and percentage of first eyes and second eyes operated

	Males		Females		Total	
	n	%	n	%	n	%
First eyes	218	64.3	362	64.6	**580**	**64.5**
Second eyes	121	35.7	198	35.4	**319**	**35.5**

16. Uncorrected refractive error and uncorrected presbyopia

	Males		Females		Total	
	n	%	n	%	n	%
Total refractive errors	413	37.7	621	39.1	**1,034**	**38.6**
Uncorrected refractive errors	128	11.7	231	14.6	**359**	**13.4**
Uncorrected presbyopia	521	47.6	914	57.6	**1,435**	**53.5**

17. Persons with Functional Low Vision: BCVA<6/18 - PL+ in the better eye; incurable

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59	0	0.0	3	0.4	**3**	**0.2**
60 - 69	2	0.5	6	1.2	**8**	**0.9**
70 - 79	4	2.8	6	3.8	**10**	**3.4**
80+	1	2.6	11	20.0	**12**	**12.9**
Total	7	0.6	26	1.6	**33**	**1.2**

18. Principal cause of functional low vision in persons: BCVA<6/18 - PL+ in better eye, incurable

	Males		Females		Total	
	n	%	n	%	n	%
1. Refractive error	0	0.0%	0	0.0%	**0**	**0.0%**
2. Aphakia uncorrected	0	0.0%	0	0.0%	**0**	**0.0%**
3. Cataract untreated	0	0.0%	0	0.0%	**0**	**0.0%**
4. Cataract surgical complications	0	0.0%	10	38.5%	**10**	**30.3%**
5. Trachomatous corneal opacity	0	0.0%	3	11.5%	**3**	**9.1%**
6. Non Trachomatous corneal opacity	2	28.6%	3	11.5%	**5**	**15.2%**
7. Phthisis	1	14.3%	0	0.0%	**1**	**3.0%**
8. Onchocerciasis	0	0.0%	0	0.0%	**0**	**0.0%**
9. Glaucoma	1	14.3%	2	7.7%	**3**	**9.1%**
10. Diabetic retinopathy	0	0.0%	0	0.0%	**0**	**0.0%**
11. ARMD	1	14.3%	0	0.0%	**1**	**3.0%**
12. Other posterior segment disease	2	28.6%	8	30.8%	**10**	**30.3%**
13. All other globe/CNS abnormalities	0	0.0%	0	0.0%	**0**	**0.0%**
Total	**7**	**100.0%**	**26**	**100.0%**	**33**	**100.0%**
Intervention by this visual impairment						
A. Treatable (1,2,3)	0	0.0%	0	0.0%	0	0.0%
B. Preventable (PHC/PEC services) (5,6,7,8)	3	42.9%	6	23.1%	9	27.3%
C. Preventable (Ophthalmic services) (4,9,10)	1	14.3%	12	46.2%	13	39.4%
D. Avoidable (A+B+C)	4	57.1%	18	69.2%	22	66.7%
E. Posterior segment causes (8,9,10,11,12)	4	57.1%	10	38.5%	14	42.4%

19. Persons with FLV and proportion of all persons in corresponding category of visual impairment with available correction

	Males		Females		Total	
	n	%	n	%	n	%
BCVA<3/60 - PL+	3	23.1	6	18.8	**9**	**20.0**
BCVA<6/60 - 3/60	1	8.3	9	26.5	**10**	**21.7**
BCVA<6/18 - 6/60	3	3.8	11	9.1	**14**	**7.0**
Total	7	6.7	26	13.9	**33**	**11.3**

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

REASONS WHY PEOPLE, BLIND DUE TO CATARACT, HAVE NOT BEEN OPERATED

Date and time of report: 11-Feb-16 3:11:54PM

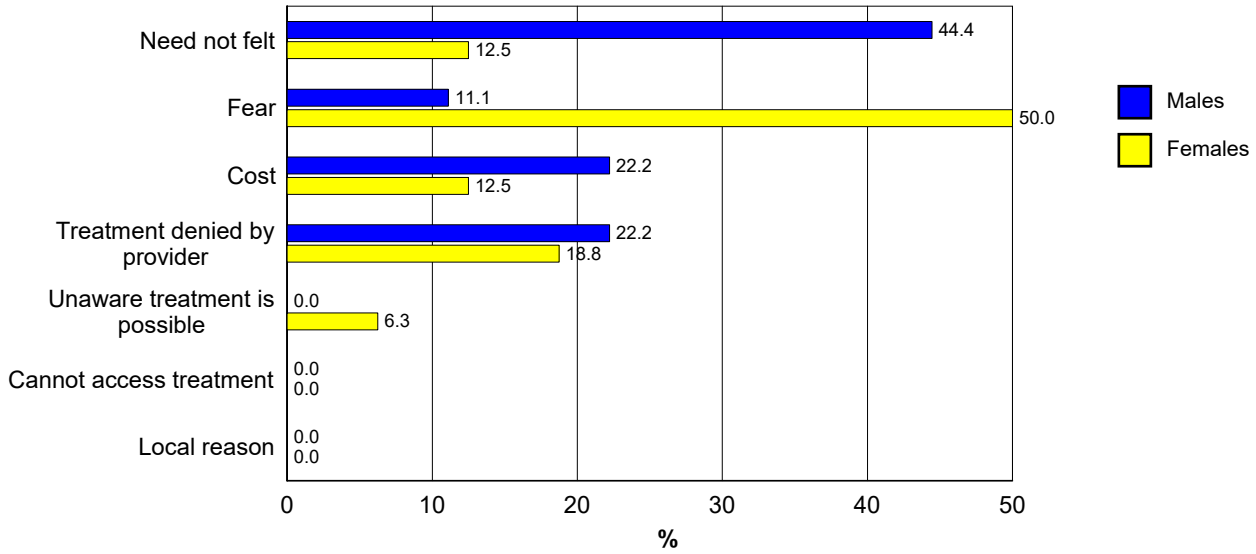
This report is for the survey area: WEST DELHI

Year and month when survey was conducted: 2015- 9 until 2016- 2

RAAB is designed as a rapid procedure and there is not enough time during the RAAB to hold in-dept interviews why people blind from cataract have not yet been operated. Hence, the data on barriers should be regarded as an indication whether more detailed qualitative studies are required.

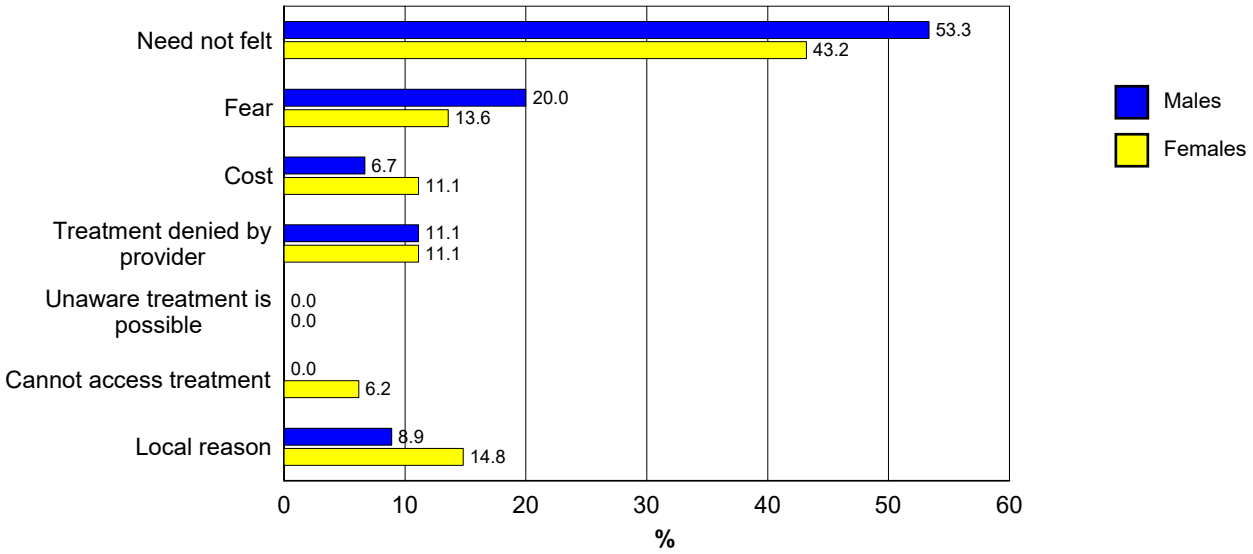
1. Barriers to cataract surgery in sample (bilateral BCVA<6/60 due to cataract)

	Males		Females		Total	
	n	%	n	%	n	%
Need not felt	4	44.4%	2	12.5%	6	24.0%
Fear	1	11.1%	8	50.0%	9	36.0%
Cost	2	22.2%	2	12.5%	4	16.0%
Treatment denied by provider	2	22.2%	3	18.8%	5	20.0%
Unaware treatment is possible	0	0.0%	1	6.3%	1	4.0%
Cannot access treatment	0	0.0%	0	0.0%	0	0.0%
Local reason	0	0.0%	0	0.0%	0	0.0%
Total	**9**	**100.0%**	**16**	**100.0%**	**25**	**100.0%**



2. Barriers to cataract surgery in sample (unilateral BCVA<6/60 due to cataract)

	Males		Females		Total	
	n	%	n	%	n	%
Need not felt	24	53.3%	35	43.2%	59	46.8%
Fear	9	20.0%	11	13.6%	20	15.9%
Cost	3	6.7%	9	11.1%	12	9.5%
Treatment denied by provider	5	11.1%	9	11.1%	14	11.1%
Unaware treatment is possible	0	0.0%	0	0.0%	0	0.0%
Cannot access treatment	0	0.0%	5	6.2%	5	4.0%
Local reason	4	8.9%	12	14.8%	16	12.7%
Total	**45**	**100.0%**	**81**	**100.0%**	**126**	**100.0%**



RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

VISUAL OUTCOME AFTER CATARACT SURGERY (LONG-TERM OUTCOME)

Date and time of report:	11-Feb-16	3:12:09PM
This report is for the survey area:	WEST DELHI	
Year and month when survey was conducted:	2015- 9 until 2016- 2	

The visual acuity of all subjects operated earlier is measured with available correction and with a pinhole. This report gives population based data on visual outcome, not specific for one surgeon or one hospital and with follow-up periods ranging from one month to several decades. When cataract surgery took place several years earlier, the chance of vision loss due to other causes than cataract increases. If the proportion of eyes with a visual outcome less than 6/60 is higher than 10%, research into the possible causes of poor visual outcome is indicated.

1. VA in operated eyes in sample with available correction (PVA)

	Non-IOL		IOL		Couching		Total	
	Eyes	%	Eyes	%	Eyes	%	Eyes	%
Very good: can see 6/12	14	30.4%	549	64.4%	0	0.0%	**563**	**62.6%**
Good: can see 6/18	6	13.0%	121	14.2%	0	0.0%	**127**	**14.1%**
Borderline: can see 6/60	8	17.4%	107	12.5%	0	0.0%	**115**	**12.8%**
Poor: cannot see 6/60	18	39.1%	76	8.9%	0	0.0%	**94**	**10.5%**
Total	**46**	**100.0%**	**853**	**100.0%**	**0**	**0.0%**	**899**	**100.0%**

2. VA in operated eyes in sample with best correction (BCVA)

	Non-IOL		IOL		Couching		Total	
	Eyes	%	Eyes	%	Eyes	%	Eyes	%
Very good: can see 6/12	18	39.1%	631	74.0%	0	0.0%	**649**	**72.2%**
Good: can see 6/18	5	10.9%	99	11.6%	0	0.0%	**104**	**11.6%**
Borderline: can see 6/60	7	15.2%	68	8.0%	0	0.0%	**75**	**8.3%**
Poor: cannot see 6/60	16	34.8%	55	6.4%	0	0.0%	**71**	**7.9%**
Total	**46**	**100.0%**	**853**	**100.0%**	**0**	**0.0%**	**899**	**100.0%**

3. VA in operated eyes in sample by years after surgery

	3 yrs postop		4 - 6 yrs postop.		7+ yrs postop		Total	
	Eyes	%	Eyes	%	Eyes	%	Eyes	%
Very good: can see 6/12	250	69.8%	147	63.6%	166	53.5%	**563**	**62.6%**
Good: can see 6/18	44	12.3%	32	13.9%	51	16.5%	**127**	**14.1%**
Borderline: can see 6/60	43	12.0%	26	11.3%	46	14.8%	**115**	**12.8%**
Poor: cannot see 6/60	21	5.9%	26	11.3%	47	15.2%	**94**	**10.5%**
Total	**358**	**100.0%**	**231**	**100.0%**	**310**	**100.0%**	**899**	**100.0%**

4. Age at time of surgery in males and females

	Males		Females		Total	
	Eyes	%	Eyes	%	Eyes	%
1 - 29	1	0.3%	0	0.0%	**1**	**0.1%**
30 - 39	3	0.9%	2	0.4%	**5**	**0.6%**
40 - 49	18	5.3%	64	11.4%	**82**	**9.1%**
50 - 59	101	29.8%	194	34.6%	**295**	**32.8%**
60 - 69	146	43.1%	219	39.1%	**365**	**40.6%**
70 - 79	58	17.1%	73	13.0%	**131**	**14.6%**
80+	12	3.5%	8	1.4%	**20**	**2.2%**
Total	**339**	**100.0%**	**560**	**100.0%**	**899**	**100.0%**

5. Place of surgery by sex

	Males		Females		Total	
	Eyes	%	Eyes	%	Eyes	%
Government Hosp.	178	52.5	338	60.4	**516**	**57.4**
Voluntary/charitable hospital	32	9.4	61	10.9	**93**	**10.3**
Private hospital	124	36.6	150	26.8	**274**	**30.5**
Eyecamp	5	1.5	11	2.0	**16**	**1.8**
Total	**339**	**100.0**	**560**	**100.0**	**899**	**100.0**

6. Post-op VA with available correction by place of surgery

	Gov. Hosp.		Vol. Hosp.		Priv. Hosp.		Eye camp		Total	
	Eyes	%	Eyes	%	Eyes	%	Eyes	%	Eyes	%
Very good: can see 6/12	310	60.1	59	63.4	188	68.6	6	37.5	**563**	**62.6**
Good: can see 6/18	74	14.3	13	14.0	35	12.8	5	31.3	**127**	**14.1**
Borderline: can see 6/60	69	13.4	18	19.4	25	9.1	3	18.8	**115**	**12.8**
Poor: cannot see 6/60	63	12.2	3	3.2	26	9.5	2	12.5	**94**	**10.5**
Total	**516**	**100.0**	**93**	**100.0**	**274**	**100.0**	**16**	**100.0**	**899**	**100.0**

7. Post-op presenting VA and causes of borderline and poor outcome

	Selection		Surgery		Spectacles		Sequelae		Can see 6/12		Total	
	Eyes	%	Eyes	%	Eyes	%	Eyes	%	Eyes	%	Eyes	%
Very good: can see 6/12	0	0.0	0	0.0	0	0.0	0	0.0	563	100.0	**563**	**62.6**
Good: can see 6/18	12	18.8	28	27.7	80	58.0	7	21.2	0	0.0	**127**	**14.1**
Borderline: can see 6/60	18	28.1	37	36.6	49	35.5	11	33.3	0	0.0	**115**	**12.8**
Poor: cannot see 6/60	34	53.1	36	35.6	9	6.5	15	45.5	0	0.0	**94**	**10.5**
Total	**64**	**100.0**	**101**	**100.0**	**138**	**100.0**	**33**	**100.0**	**563**	**100.0**	**899**	**100.0**

8. Proportion and type of surgery

	Males		Females		Total	
	Eyes	%	Eyes	%	Eyes	%
Non-IOL	10	2.9	36	6.4	**46**	**5.1**
IOL	329	97.1	524	93.6	**853**	**94.9**
Couching	0	0.0	0	0.0	**0**	**0.0**
Total	**339**	**100.0**	**560**	**100.0**	**899**	**100.0**

RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

INDICATORS BY SEX AND BY AGE GROUP - FINDINGS FROM SAMPLE

Date and time of report:	11-Feb-16	3:16:50PM
This report is for the survey area:	WEST DELHI	
Year and month when survey was conducted:	2015- 9 until 2016- 2	

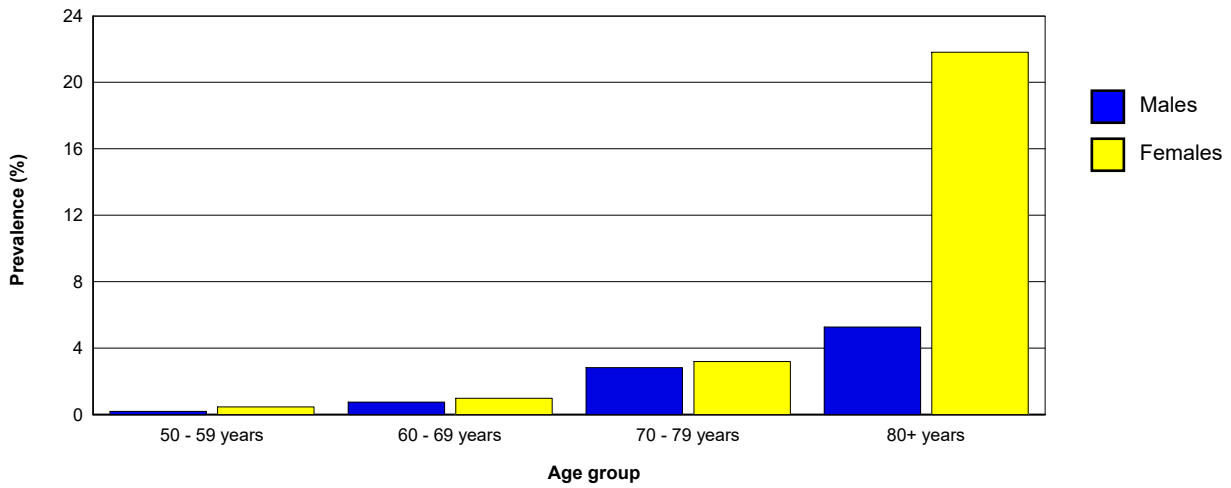
The sample size of the Rapid Assessment is sufficient to provide an acceptable accuracy of the overall prevalence of bilateral blindness (VA <3/60). The accuracy of prevalence estimates for any subgroup is far less and caution should be taken in the interpretation of these data. Confidence intervals for prevalence of various conditions can be calculated with menu Reports / Sampling error & Design Effect.

1. Age and sex distribution of people examined in the sample

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	515	47.0%	868	54.7%	1,383	50.9%
60 - 69 years	401	36.6%	507	31.9%	908	34.3%
70 - 79 years	141	12.9%	157	9.9%	298	11.4%
80+ years	38	3.5%	55	3.5%	93	3.5%
Total	**1,095**	**100.0%**	**1,587**	**100.0%**	**2,682**	**100.0%**

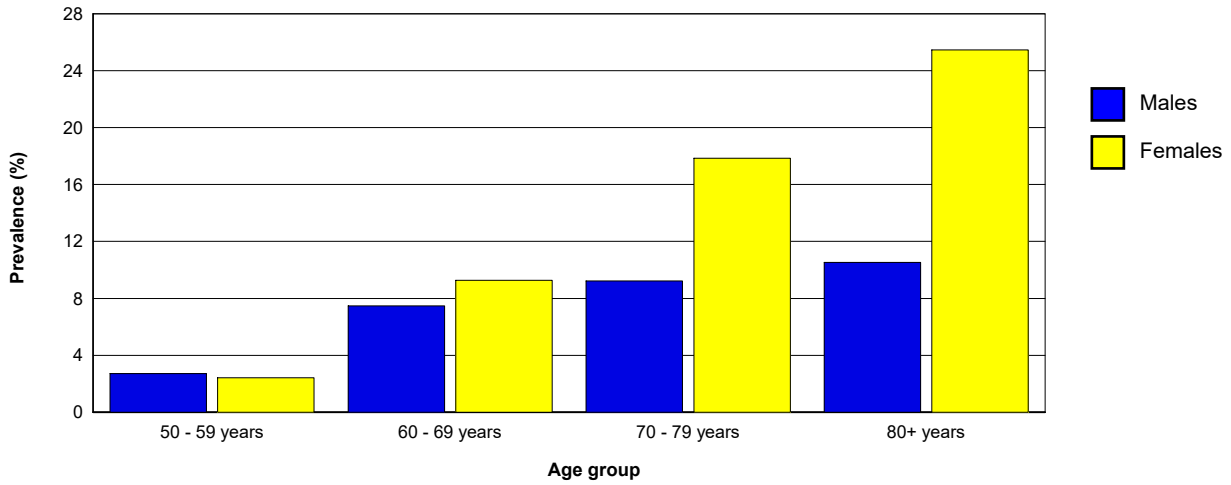
2. Prevalence of people with bilateral blindness - VA <3/60 in better eye with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	1	0.2%	4	0.5%	5	0.4%
60 - 69 years	3	0.7%	5	1.0%	8	0.9%
70 - 79 years	4	2.8%	5	3.2%	9	3.0%
80+ years	2	5.3%	12	21.8%	14	15.1%
Total	**10**	**0.9%**	**26**	**1.6%**	**36**	**1.3%**



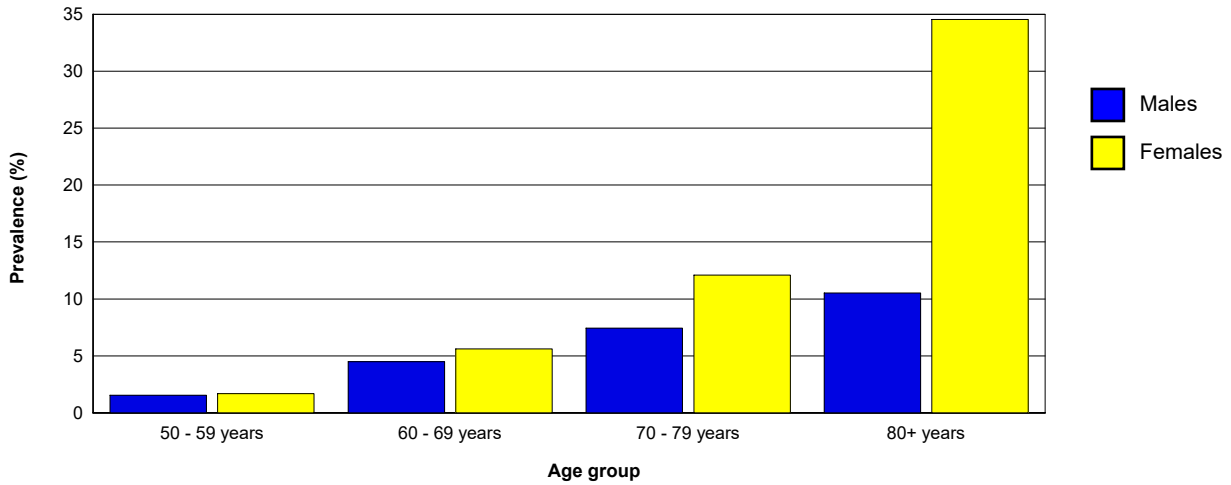
3. Prevalence of people with unilateral blindness - VA <3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	14	2.7%	21	2.4%	35	2.5%
60 - 69 years	30	7.5%	47	9.3%	77	8.5%
70 - 79 years	13	9.2%	28	17.8%	41	13.8%
80+ years	4	10.5%	14	25.5%	18	19.4%
Total	**61**	**5.6%**	**110**	**6.9%**	**171**	**6.4%**



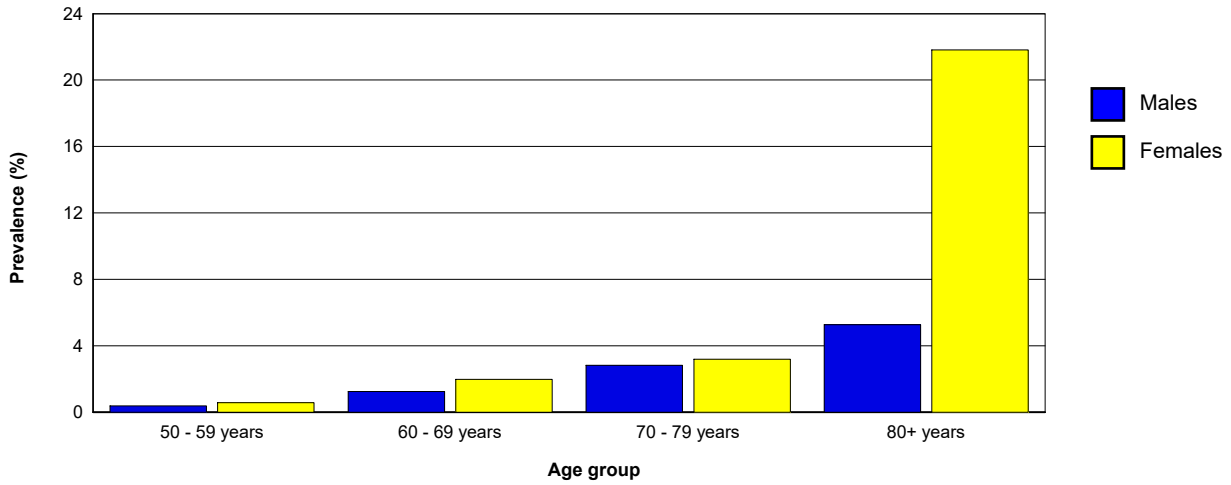
4. Prevalence of blind eyes - VA <3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	16	1.6%	29	1.7%	45	1.6%
60 - 69 years	36	4.5%	57	5.6%	93	5.1%
70 - 79 years	21	7.4%	38	12.1%	59	9.9%
80+ years	8	10.5%	38	34.5%	46	24.7%
Total	**81**	**3.7%**	**162**	**5.1%**	**243**	**4.5%**



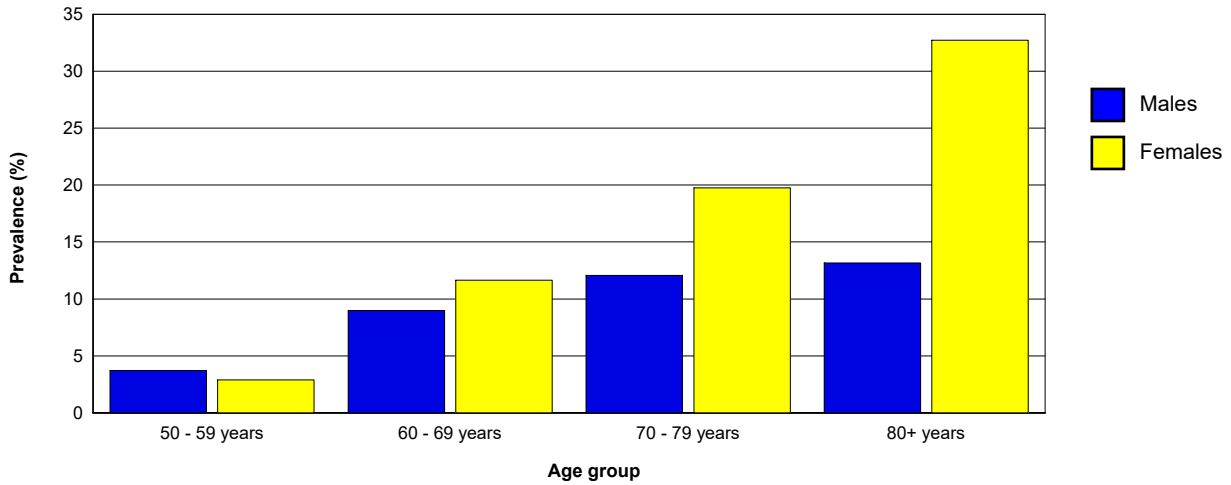
5. Prevalence of people with bilateral blindness - VA <3/60 in better eye with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	2	0.4%	5	0.6%	7	0.5%
60 - 69 years	5	1.2%	10	2.0%	15	1.7%
70 - 79 years	4	2.8%	5	3.2%	9	3.0%
80+ years	2	5.3%	12	21.8%	14	15.1%
Total	**13**	**1.2%**	**32**	**2.0%**	**45**	**1.7%**



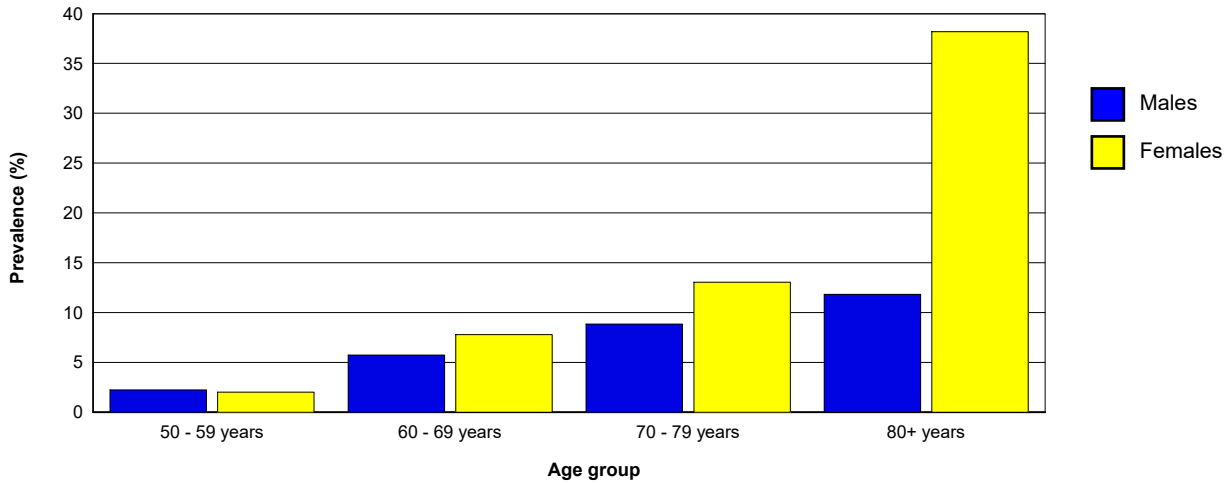
6. Prevalence of people with unilateral blindness - VA <3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	19	3.7%	25	2.9%	44	3.2%
60 - 69 years	36	9.0%	59	11.6%	95	10.5%
70 - 79 years	17	12.1%	31	19.7%	48	16.1%
80+ years	5	13.2%	18	32.7%	23	24.7%
Total	**77**	**7.0%**	**133**	**8.4%**	**210**	**7.8%**



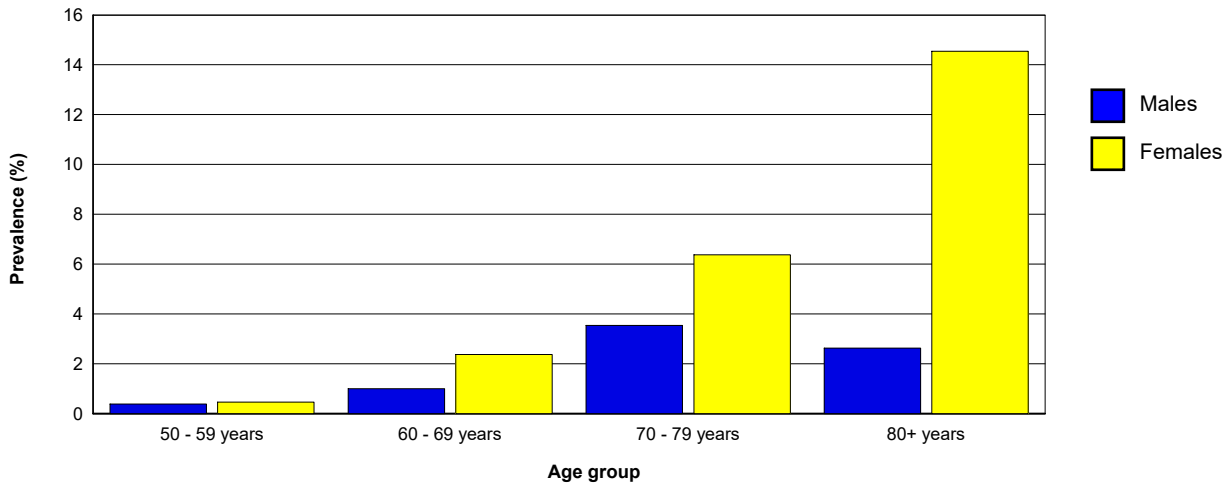
7. Prevalence of blind eyes - VA <3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	23	2.2%	35	2.0%	58	2.1%
60 - 69 years	46	5.7%	79	7.8%	125	6.9%
70 - 79 years	25	8.9%	41	13.1%	66	11.1%
80+ years	9	11.8%	42	38.2%	51	27.4%
Total	**103**	**4.7%**	**197**	**6.2%**	**300**	**5.6%**



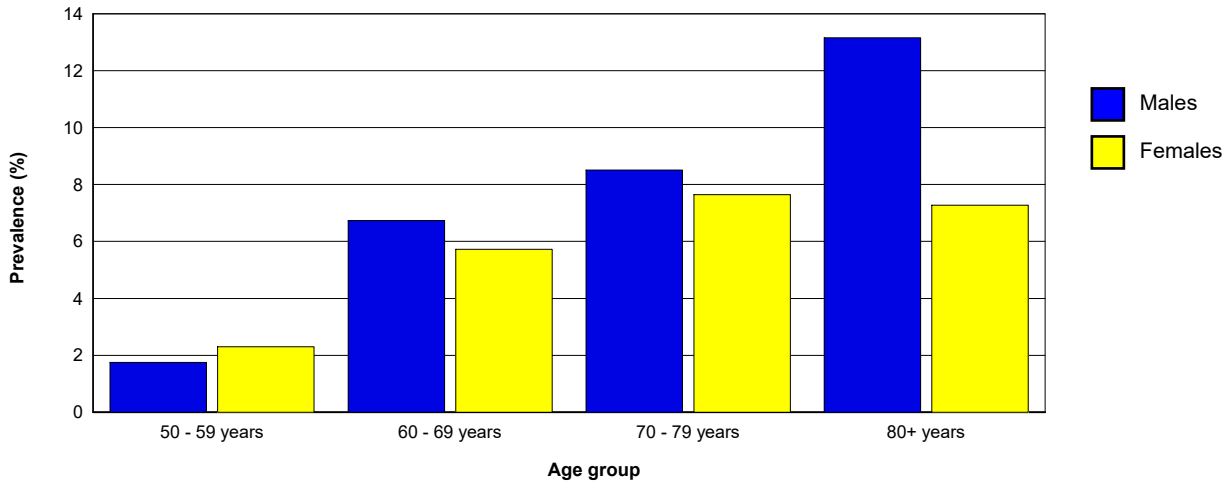
8. Prevalence of people with bilateral severe visual impairment - VA<6/60-3/60 in better eye with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	2	0.4%	4	0.5%	6	0.4%
60 - 69 years	4	1.0%	12	2.4%	16	1.8%
70 - 79 years	5	3.5%	10	6.4%	15	5.0%
80+ years	1	2.6%	8	14.5%	9	9.7%
Total	**12**	**1.1%**	**34**	**2.1%**	**46**	**1.7%**



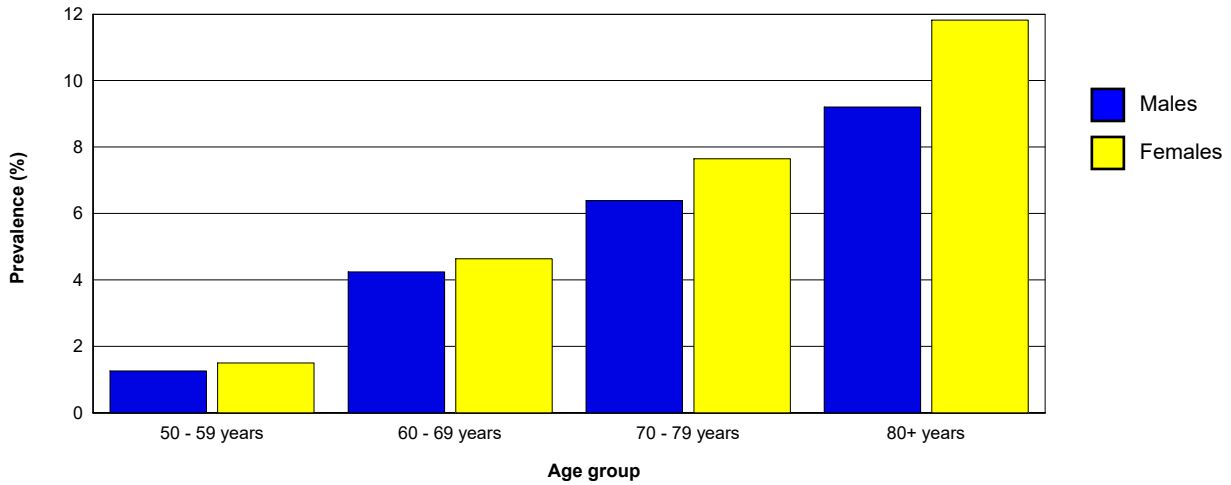
9. Prevalence of people with unilateral severe visual impairment - VA <6/60-3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	9	1.7%	20	2.3%	29	2.1%
60 - 69 years	27	6.7%	29	5.7%	56	6.2%
70 - 79 years	12	8.5%	12	7.6%	24	8.1%
80+ years	5	13.2%	4	7.3%	9	9.7%
Total	**53**	**4.8%**	**65**	**4.1%**	**118**	**4.4%**



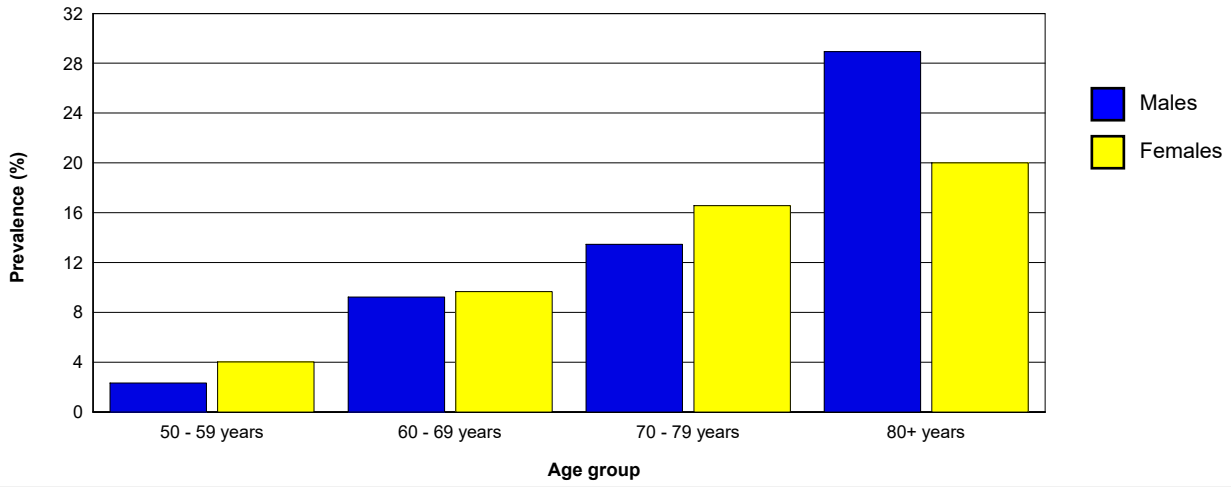
10. Prevalence of SVI eyes - VA VA<6/60-3/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	13	1.3%	26	1.5%	39	1.4%
60 - 69 years	34	4.2%	47	4.6%	81	4.5%
70 - 79 years	18	6.4%	24	7.6%	42	7.0%
80+ years	7	9.2%	13	11.8%	20	10.8%
Total	**72**	**3.3%**	**110**	**3.5%**	**182**	**3.4%**



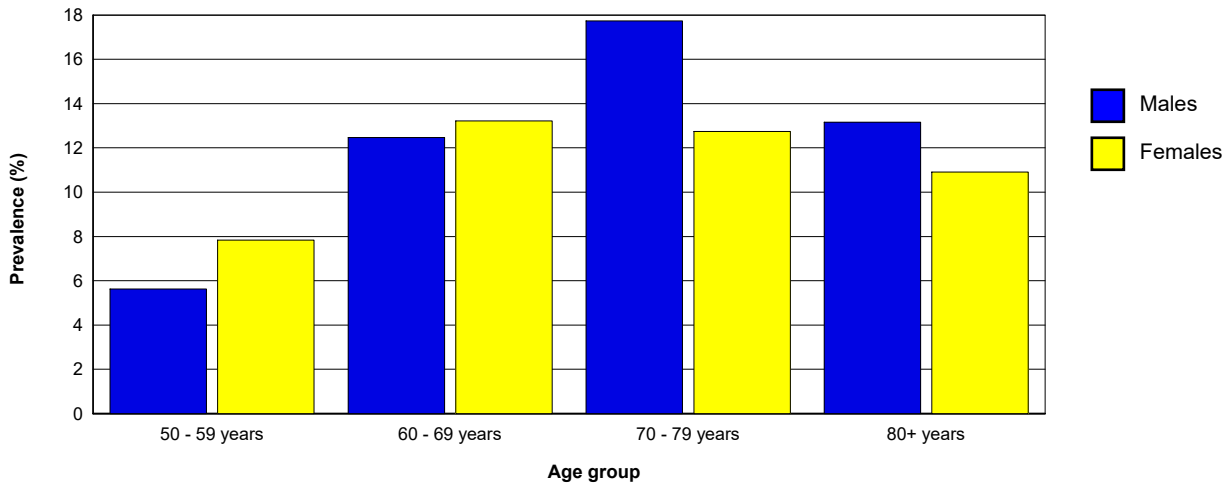
11. Prevalence of people with bilateral moderate visual impairment - VA <6/18-6/60 in better eye with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	12	2.3%	35	4.0%	47	3.4%
60 - 69 years	37	9.2%	49	9.7%	86	9.5%
70 - 79 years	19	13.5%	26	16.6%	45	15.1%
80+ years	11	28.9%	11	20.0%	22	23.7%
Total	**79**	**7.2%**	**121**	**7.6%**	**200**	**7.5%**



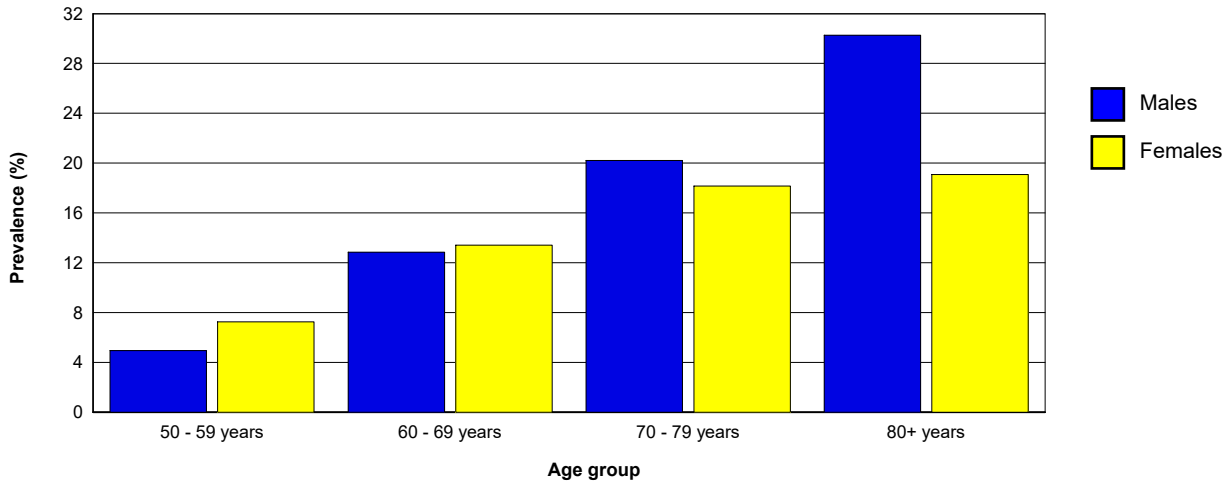
12. Prevalence of people with unilateral visual impairment - VA <6/18-6/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	29	5.6%	68	7.8%	97	7.0%
60 - 69 years	50	12.5%	67	13.2%	117	12.9%
70 - 79 years	25	17.7%	20	12.7%	45	15.1%
80+ years	5	13.2%	6	10.9%	11	11.8%
Total	**109**	**10.0%**	**161**	**10.1%**	**270**	**10.1%**



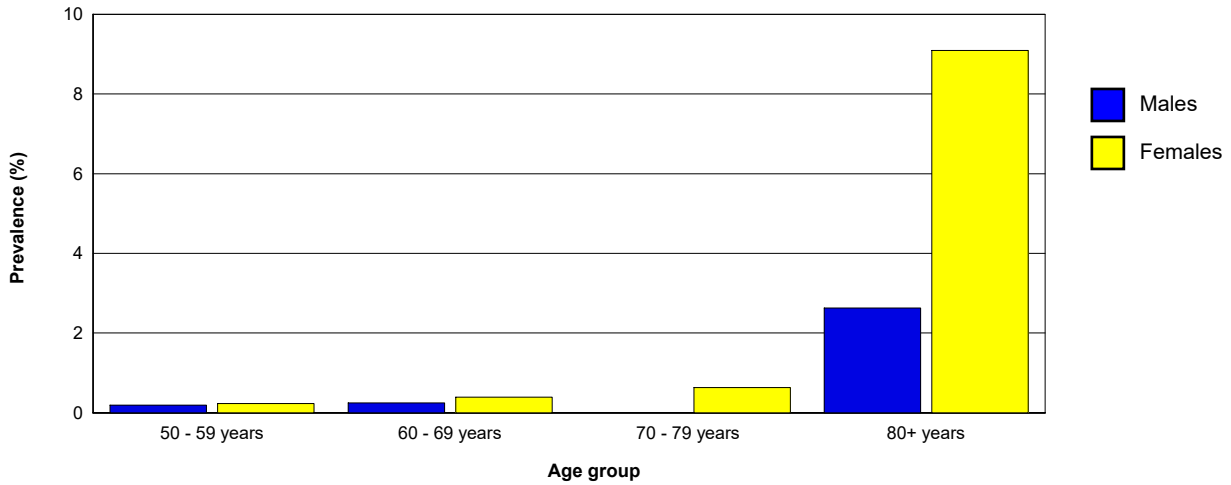
13. Prevalence of MVI eyes - VA<6/18-6/60 with available correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	51	5.0%	126	7.3%	177	6.4%
60 - 69 years	103	12.8%	136	13.4%	239	13.2%
70 - 79 years	57	20.2%	57	18.2%	114	19.1%
80+ years	23	30.3%	21	19.1%	44	23.7%
Total	**234**	**10.7%**	**340**	**10.7%**	**574**	**10.7%**



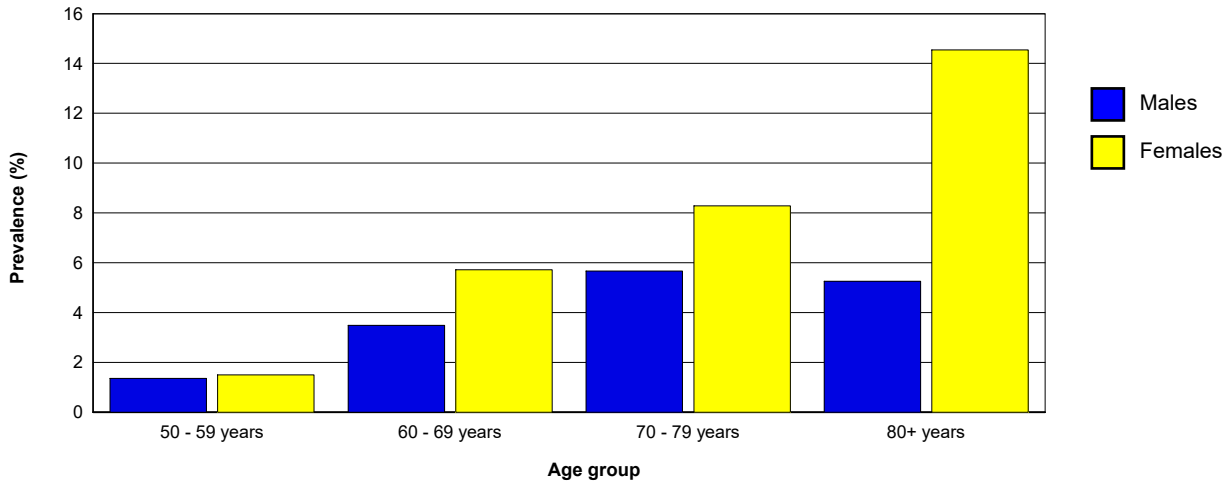
14. Prevalence of people bilateral blind due to cataract - VA<3/60 in better eye with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	1	0.2%	2	0.2%	3	0.2%
60 - 69 years	1	0.2%	2	0.4%	3	0.3%
70 - 79 years	0	0.0%	1	0.6%	1	0.3%
80+ years	1	2.6%	5	9.1%	6	6.5%
Total	**3**	**0.3%**	**10**	**0.6%**	**13**	**0.5%**



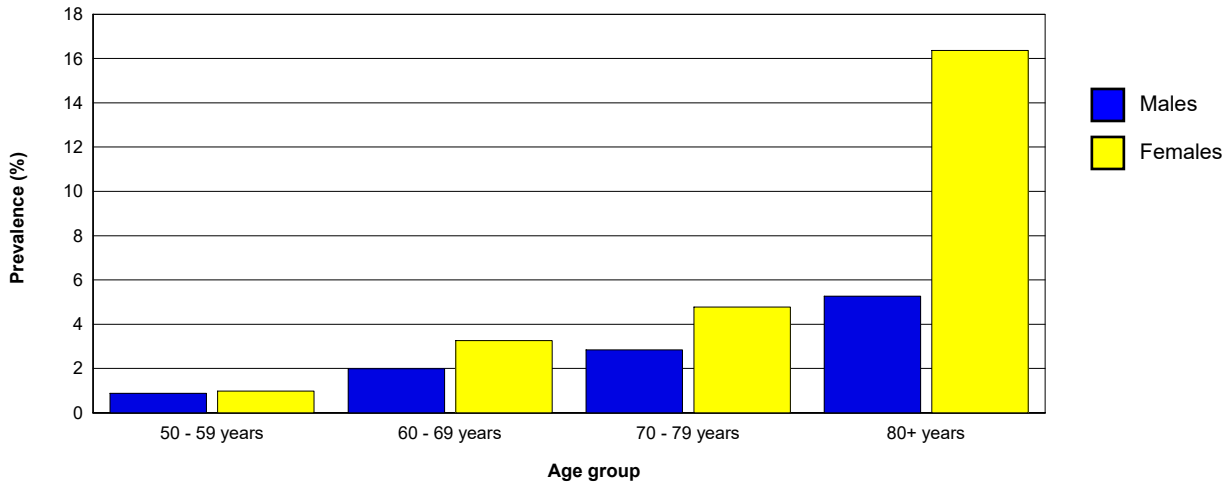
15. Prevalence of people unilateral blind due to cataract - VA <3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	7	1.4%	13	1.5%	20	1.4%
60 - 69 years	14	3.5%	29	5.7%	43	4.7%
70 - 79 years	8	5.7%	13	8.3%	21	7.0%
80+ years	2	5.3%	8	14.5%	10	10.8%
Total	**31**	**2.8%**	**63**	**4.0%**	**94**	**3.5%**



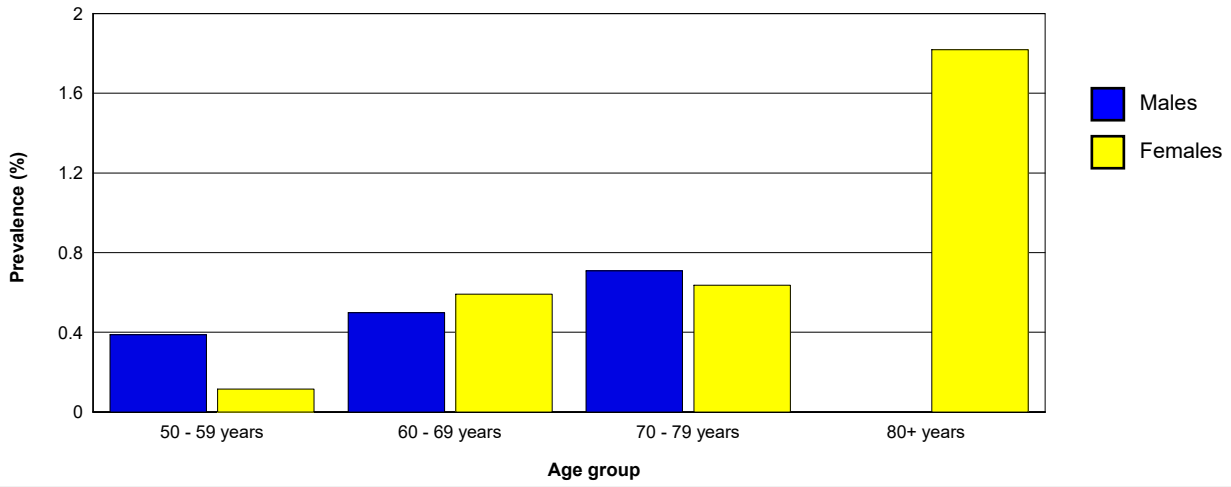
16. Prevalence of cataract blind eyes - VA <3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	9	0.9%	17	1.0%	26	0.9%
60 - 69 years	16	2.0%	33	3.3%	49	2.7%
70 - 79 years	8	2.8%	15	4.8%	23	3.9%
80+ years	4	5.3%	18	16.4%	22	11.8%
Total	**37**	**1.7%**	**83**	**2.6%**	**120**	**2.2%**



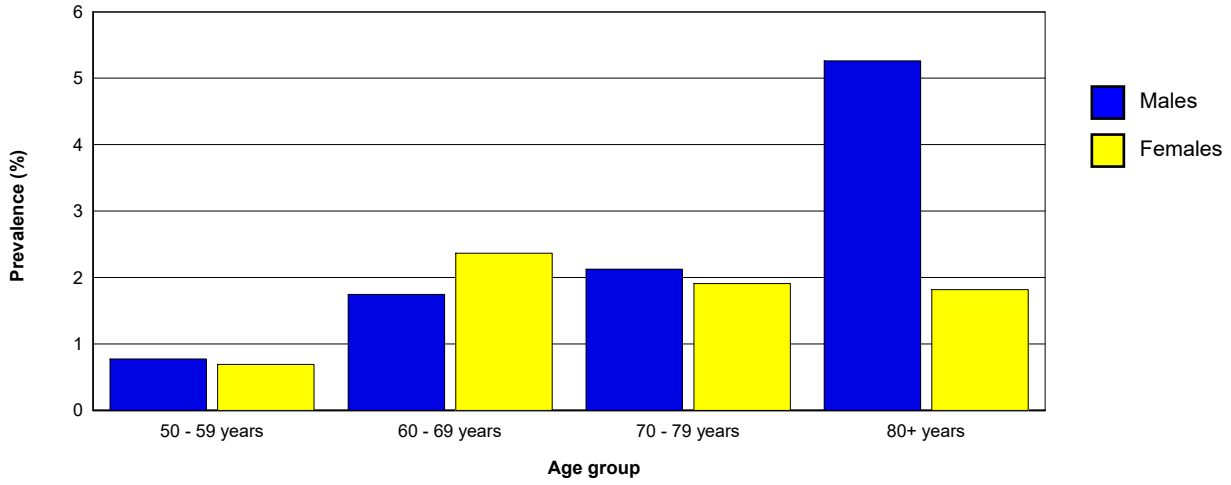
17. Prevalence of people with bilateral severe visual impairment due to cataract - VA <6/60-3/60 - best eye, best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	2	0.4%	1	0.1%	3	0.2%
60 - 69 years	2	0.5%	3	0.6%	5	0.6%
70 - 79 years	1	0.7%	1	0.6%	2	0.7%
80+ years	0	0.0%	1	1.8%	1	1.1%
Total	**5**	**0.5%**	**6**	**0.4%**	**11**	**0.4%**



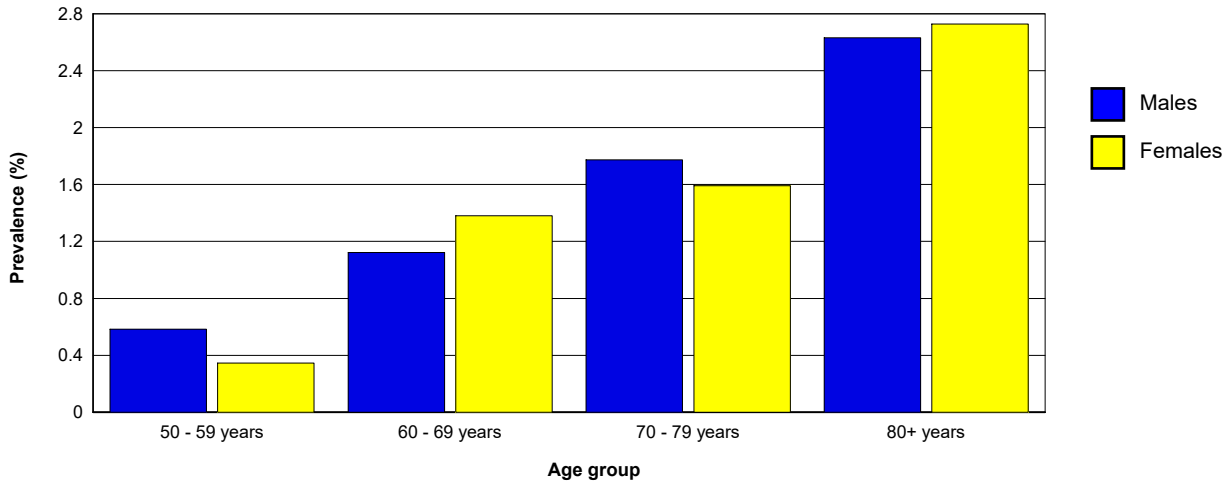
18. Prevalence of people with unilateral severe visual impairment due to cataract - VA<6/60-3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	4	0.8%	6	0.7%	10	0.7%
60 - 69 years	7	1.7%	12	2.4%	19	2.1%
70 - 79 years	3	2.1%	3	1.9%	6	2.0%
80+ years	2	5.3%	1	1.8%	3	3.2%
Total	**16**	**1.5%**	**22**	**1.4%**	**38**	**1.4%**



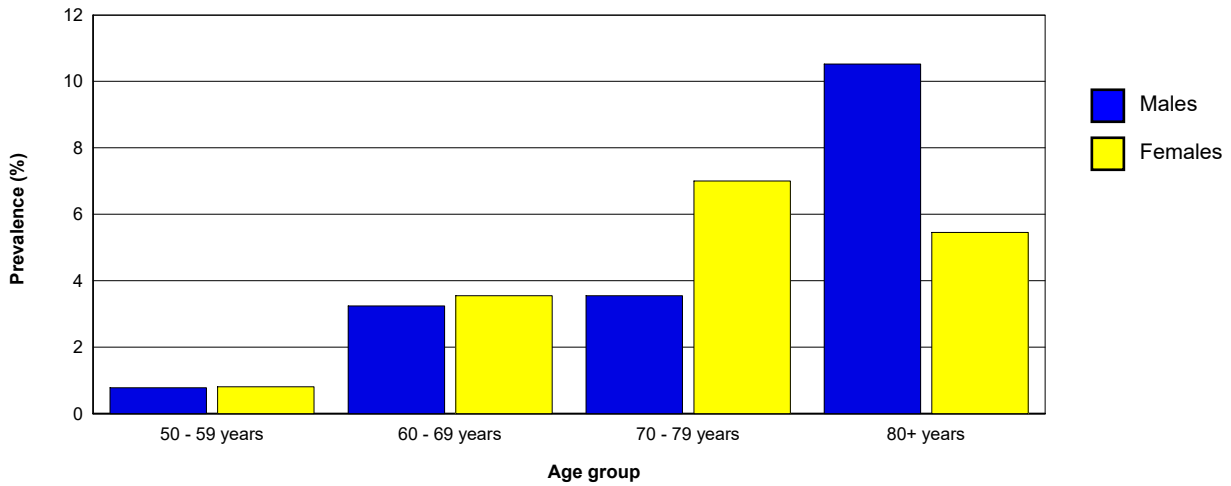
19. Prevalence of cataract SVI eyes - VA<6/60-3/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	6	0.6%	6	0.3%	12	0.4%
60 - 69 years	9	1.1%	14	1.4%	23	1.3%
70 - 79 years	5	1.8%	5	1.6%	10	1.7%
80+ years	2	2.6%	3	2.7%	5	2.7%
Total	**22**	**1.0%**	**28**	**0.9%**	**50**	**0.9%**



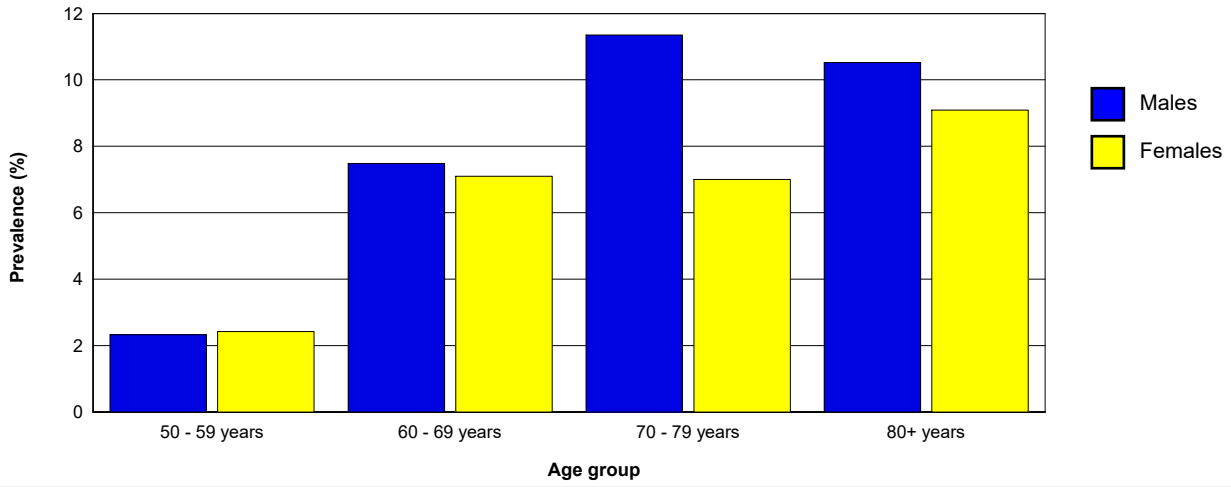
20. Prevalence of people with bilateral moderate visual impairment due to cataract - VA<6/18-6/60 - best eye, best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	4	0.8%	7	0.8%	11	0.8%
60 - 69 years	13	3.2%	18	3.6%	31	3.4%
70 - 79 years	5	3.5%	11	7.0%	16	5.4%
80+ years	4	10.5%	3	5.5%	7	7.5%
Total	**26**	**2.4%**	**39**	**2.5%**	**65**	**2.4%**



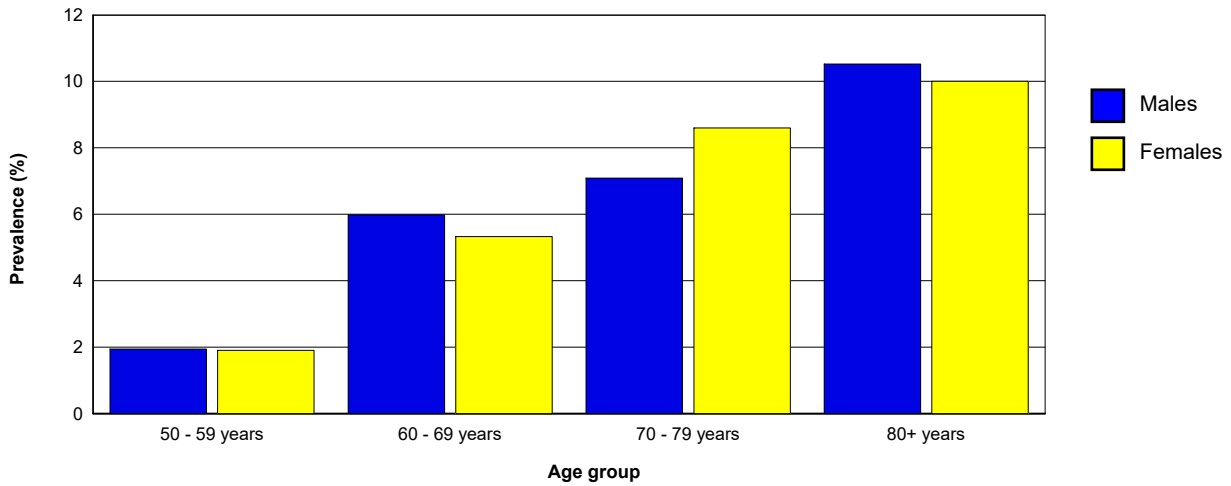
21. Prevalence of people with unilateral moderate visual impairment due to cataract - VA<6/18-6/60 best corrected

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	12	2.3%	21	2.4%	33	2.4%
60 - 69 years	30	7.5%	36	7.1%	66	7.3%
70 - 79 years	16	11.3%	11	7.0%	27	9.1%
80+ years	4	10.5%	5	9.1%	9	9.7%
Total	**62**	**5.7%**	**73**	**4.6%**	**135**	**5.0%**



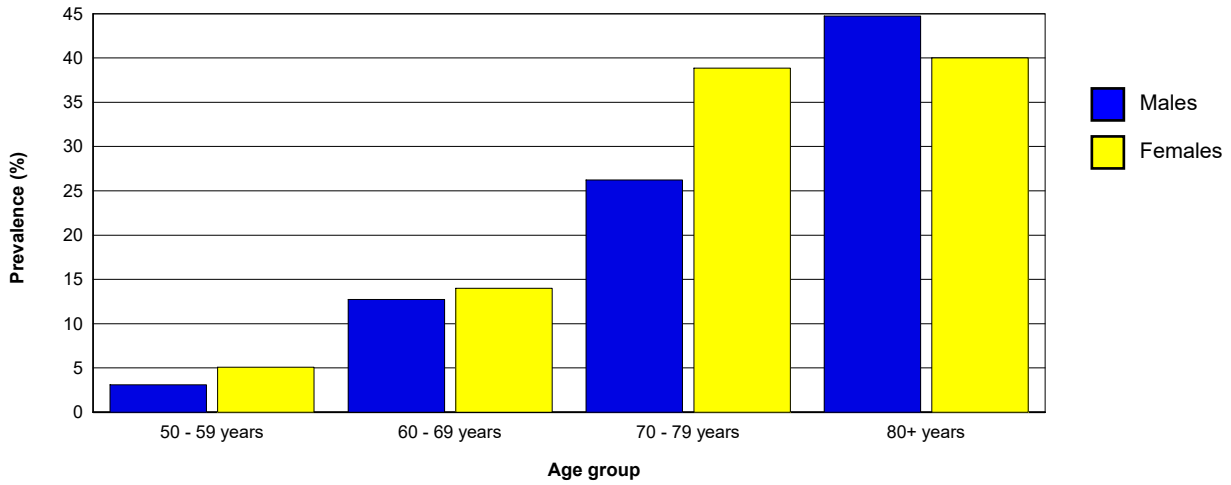
22. Prevalence of cataract MVI eyes - VA <6/18-6/60 with best correction

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	20	1.9%	33	1.9%	53	1.9%
60 - 69 years	48	6.0%	54	5.3%	102	5.6%
70 - 79 years	20	7.1%	27	8.6%	47	7.9%
80+ years	8	10.5%	11	10.0%	19	10.2%
Total	**96**	**4.4%**	**125**	**3.9%**	**221**	**4.1%**



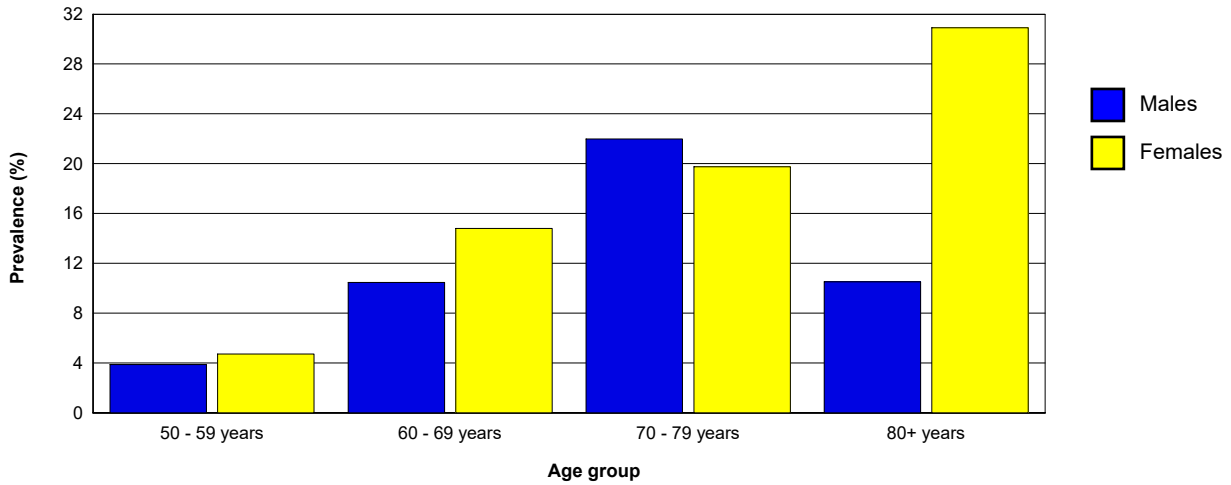
23. Prevalence of people with bilateral (pseudo)aphakia

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	16	3.1%	44	5.1%	60	4.3%
60 - 69 years	51	12.7%	71	14.0%	122	13.4%
70 - 79 years	37	26.2%	61	38.9%	98	32.9%
80+ years	17	44.7%	22	40.0%	39	41.9%
Total	**121**	**11.1%**	**198**	**12.5%**	**319**	**11.9%**



24. Prevalence of people with unilateral (pseudo)aphakia

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	20	3.9%	41	4.7%	61	4.4%
60 - 69 years	42	10.5%	75	14.8%	117	12.9%
70 - 79 years	31	22.0%	31	19.7%	62	20.8%
80+ years	4	10.5%	17	30.9%	21	22.6%
Total	**97**	**8.9%**	**164**	**10.3%**	**261**	**9.7%**



RESULTS OF RAPID ASSESSMENT OF AVOIDABLE BLINDNESS

AGE AND SEX ADJUSTED PREVALENCE AND ESTIMATED NUMBERS

Date and time of report: 11-Feb-16 3:12:56PM

This report is for the survey area: WEST DELHI

Year and month when survey was conducted: 2015- 9 until 2016- 2

The prevalence of blindness and visual impairment increases strongly with age and in most communities, females are more affected than males. Normally, the people examined in the sample should have the same composition by age and by sex as the total population in the survey area. When there is a difference, the prevalence for the survey area will also differ. Table 2 and 3 compare the composition in the sample with that of the survey area. By combining the age and sex specific prevalence with the actual population, the age and sex adjusted prevalence and the actual number of people affected in the survey area can be calculated. The 95% confidence interval, based on the sample error in cluster sampling, is also given.

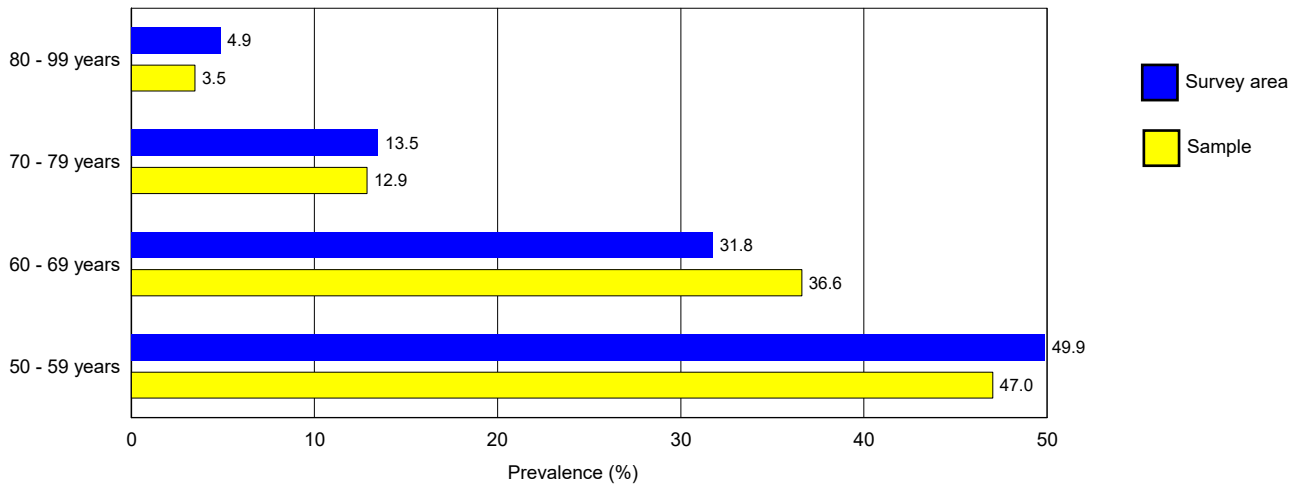
1. Age and sex distribution of people examined in the sample

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	515	47.0%	868	54.7%	**1,383**	**51.6%**
60 - 69 years	401	36.6%	507	31.9%	**908**	**33.9%**
70 - 79 years	141	12.9%	157	9.9%	**298**	**11.1%**
80 - 99 years	38	3.5%	55	3.5%	**93**	**3.5%**
Total	**1,095**	**100.0%**	**1,587**	**100.0%**	**2,682**	**100.0%**

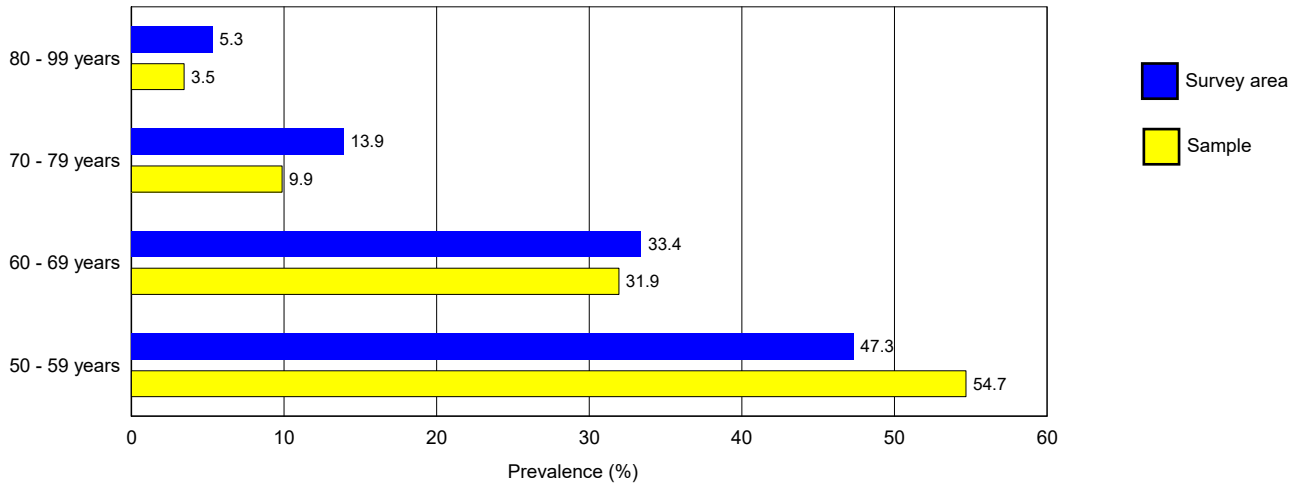
2. Total number of people aged 50+ in survey area

	Males		Females		Total	
	n	%	n	%	n	%
50 - 59 years	104,311	49.9%	94,588	47.3%	**198,899**	**48.6%**
60 - 69 years	66,407	31.8%	66,797	33.4%	**133,204**	**32.6%**
70 - 79 years	28,193	13.5%	27,802	13.9%	**55,995**	**13.7%**
80 - 99 years	10,194	4.9%	10,661	5.3%	**20,855**	**5.1%**
Total	**209,105**	**100.0%**	**199,848**	**100.0%**	**408,953**	**100.0%**

3. Proportion of males in total survey area and in sample



4. Proportion of females in total survey area and in sample



5. Adjusted results for all causes of blindness, severe (SVI), moderate (MVI) and early visual impairment (SVI)

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Blindness - VA < 3/60 in the better eye with best correction or pinhole						
All bilateral cases	2,037	1.0 (0.4 - 1.5)	4,306	2.2 (1.6 - 2.7)	6,343	1.6 (1.1 - 2.0)
All eyes	15,548	3.7 (3.0 - 4.5)	24,765	6.2 (5.4 - 7.0)	40,313	4.9 (4.3 - 5.5)
Blindness - VA < 3/60 in the better eye with available correction (presenting VA)						
All bilateral cases	2,570	1.2 (0.6 - 1.8)	5,074	2.5 (1.8 - 3.2)	7,644	1.9 (1.3 - 2.4)
All eyes	19,690	4.7 (3.8 - 5.6)	29,623	7.4 (6.5 - 8.3)	49,313	6.0 (5.3 - 6.7)
Severe visual impairment (SVI) - VA<6/60 - 3/60 in the better eye with available correction						
All bilateral cases	2,335	1.1 (0.4 - 1.9)	5,339	2.7 (1.9 - 3.5)	7,674	1.9 (1.3 - 2.5)
All eyes	13,741	3.3 (2.3 - 4.2)	15,795	4.0 (3.1 - 4.8)	29,536	3.6 (2.9 - 4.3)
Moderate visual impairment (MVI) - VA<6/18 - 6/60 in the better eye with available correction						
All bilateral cases	15,308	7.3 (5.5 - 9.1)	17,006	8.5 (6.9 - 10.1)	32,314	7.9 (6.7 - 9.1)
All eyes	44,954	10.7 (9.0 - 12.5)	45,813	11.5 (10.0 - 12.9)	90,767	11.1 (9.8 - 12.4)
Early visual impairment (EVI) - VA<6/12 - 6/18 in the better eye with available correction						
All bilateral cases	19,043	9.1 (7.4 - 10.8)	26,537	13.3 (11.1 - 15.5)	45,580	11.1 (9.5 - 12.8)
All eyes	42,985	10.3 (8.7 - 11.8)	60,436	15.1 (13.5 - 16.8)	103,421	12.6 (11.4 - 13.9)

6. Adjusted results for all causes of blindness, VA<3/60, <6/60 and <6/18 with available correction

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Blindness - VA < 3/60 in the better eye with available correction (presenting VA)						
All bilateral cases	2,570	1.2 (0.6 - 1.8)	5,074	2.5 (1.8 - 3.2)	7,644	1.9 (1.3 - 2.4)
All eyes	19,690	4.7 (3.8 - 5.6)	29,623	7.4 (6.5 - 8.3)	49,313	6.0 (5.3 - 6.7)
VA<6/60 in the better eye, with available correction (presenting VA)						
All bilateral cases	4,905	2.3 (1.2 - 3.5)	10,413	5.2 (4.3 - 6.1)	15,318	3.7 (3.0 - 4.5)
All eyes	33,430	8.0 (6.6 - 9.4)	45,419	11.4 (10.1 - 12.7)	78,849	9.6 (8.6 - 10.6)
VA<6/18 in the better eye, with available correction (presenting VA)						
All bilateral cases	20,214	9.7 (7.4 - 11.9)	27,418	13.7 (11.9 - 15.5)	47,632	11.6 (10.2 - 13.1)
All eyes	78,384	18.7 (16.2 - 21.3)	91,233	22.8 (20.8 - 24.8)	169,617	20.7 (19.0 - 22.5)
VA<6/12 in the better eye, with available correction (presenting VA)						
All bilateral cases	39,256	18.8 (15.7 - 21.9)	53,955	27.0 (23.9 - 30.1)	93,211	22.8 (20.1 - 25.4)
All eyes	121,370	29.0 (25.8 - 32.2)	151,670	37.9 (35.1 - 40.8)	273,040	33.4 (30.8 - 36.0)

7. Adjusted results for cataract and blindness, SVI, MVI and EVI (best corrected)

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Cataract and VA<3/60 with best correction or pinhole						
Bilateral cataract	637	0.3 (0.0 - 0.6)	1,628	0.8 (0.5 - 1.2)	2,265	0.6 (0.3 - 0.8)
Unilateral cataract	5,873	2.8 (1.8 - 3.8)	9,091	4.5 (3.6 - 5.5)	14,964	3.7 (2.9 - 4.4)
Cataract eyes	7,146	1.7 (1.2 - 2.3)	12,346	3.1 (2.5 - 3.7)	19,492	2.4 (2.0 - 2.8)
Cataract and SVI - VA<6/60 - 3/60 in better eye with best correction or pinhole						
Bilateral cataract	936	0.4 (0.1 - 0.8)	875	0.4 (0.2 - 0.6)	1,811	0.4 (0.3 - 0.6)
Unilateral cataract	2,739	1.3 (0.3 - 2.3)	2,588	1.3 (0.7 - 1.9)	5,327	1.3 (0.7 - 1.9)
Cataract eyes	4,242	1.0 (0.4 - 1.6)	3,966	1.0 (0.6 - 1.4)	8,208	1.0 (0.6 - 1.4)
Cataract and Moderate VI (MVI) - VA<6/18 - 6/60 in better eye with best correction or pinhole						
Bilateral cataract	5,036	2.4 (1.6 - 3.2)	5,665	2.8 (2.1 - 3.6)	10,701	2.6 (2.0 - 3.2)
Unilateral cataract	9,873	4.7 (3.3 - 6.1)	8,122	4.1 (3.0 - 5.1)	17,995	4.4 (3.5 - 5.3)
Cataract eyes	18,145	4.3 (3.4 - 5.3)	17,624	4.4 (3.4 - 5.5)	35,769	4.4 (3.6 - 5.2)
Cataract and Early VI (EVI) - VA<6/12 - 6/18 in better eye with best correction or pinhole						
Bilateral cataract	2,904	0.7 (0.2 - 1.1)	3,027	0.8 (0.3 - 1.2)	5,931	0.7 (0.4 - 1.1)
Unilateral cataract	3,734	0.9 (-0.2 - 2.0)	4,304	1.1 (0.1 - 2.1)	8,038	1.0 (0.2 - 1.8)
Cataract eyes	7,969	1.9 (1.2 - 2.6)	8,754	2.2 (1.5 - 2.9)	16,723	2.0 (1.5 - 2.6)

8. Adjusted results for cataract and VA<3/60, <6/60, < 6/18 and <6/12 with best correction

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Cataract and VA<3/60 with best correction or pinhole						
Bilateral cataract	637	0.3 (0.0 - 0.6)	1,628	0.8 (0.5 - 1.2)	2,265	0.6 (0.3 - 0.8)
Unilateral cataract	5,873	2.8 (1.8 - 3.8)	9,091	4.5 (3.6 - 5.5)	14,964	3.7 (2.9 - 4.4)
Cataract eyes	7,146	1.7 (1.2 - 2.3)	12,346	3.1 (2.5 - 3.7)	19,492	2.4 (2.0 - 2.8)
Cataract and VA<6/60 with best correction or pinhole						
Bilateral cataract	1,573	0.8 (0.3 - 1.2)	2,503	1.3 (0.8 - 1.7)	4,076	1.0 (0.7 - 1.3)
Unilateral cataract	8,609	4.1 (2.5 - 5.8)	11,677	5.8 (4.8 - 6.9)	20,286	5.0 (4.0 - 5.9)
Cataract eyes	11,387	2.7 (1.8 - 3.7)	16,311	4.1 (3.4 - 4.7)	27,698	3.4 (2.8 - 4.0)
Cataract and VA<6/18 with best correction or pinhole						
Bilateral cataract	6,609	3.2 (2.1 - 4.2)	8,167	4.1 (3.2 - 5.0)	14,776	3.6 (2.9 - 4.3)
Unilateral cataract	18,483	8.8 (6.4 - 11.3)	19,801	9.9 (8.2 - 11.6)	38,284	9.4 (7.9 - 10.8)
Cataract eyes	29,532	7.1 (5.5 - 8.6)	33,935	8.5 (7.1 - 9.9)	63,467	7.8 (6.6 - 8.9)
Cataract and VA<6/12 with best correction or pinhole						
Bilateral cataract	9,512	4.5 (3.4 - 5.7)	11,193	5.6 (4.6 - 6.6)	20,705	5.1 (4.3 - 5.9)
Unilateral cataract	22,217	10.6 (7.8 - 13.4)	24,103	12.1 (10.1 - 14.0)	46,320	11.3 (9.6 - 13.0)
Cataract eyes	37,501	9.0 (7.4 - 10.6)	42,689	10.7 (9.1 - 12.2)	80,190	9.8 (8.5 - 11.1)

9. Adjusted results for aphakia and pseudophakia

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Bilateral (pseudo)aphakia	23,645	11.3 (8.6 - 14.0)	29,215	14.6 (12.9 - 16.4)	52,860	12.9 (11.2 - 14.7)
Unilateral (pseudo)aphakia	18,277	8.7 (7.0 - 10.5)	23,134	11.6 (9.8 - 13.4)	41,411	10.1 (8.7 - 11.6)
Eyes (pseudo)aphakia	65,568	15.7 (13.0 - 18.3)	81,565	20.4 (18.5 - 22.3)	147,133	18.0 (16.2 - 19.8)

10. Adjusted results for cataract surgical coverage

	Males	Females	Total
Cataract Surgical Coverage (eyes) - percentage			
VA < 3/60	90.2	86.9	88.3
VA < 6/60	85.2	83.3	84.2
VA < 6/18	68.9	70.6	69.9
Cataract Surgical Coverage (persons) - percentage			
VA < 3/60	97.9	96.0	96.8
VA < 6/60	95.0	94.1	94.5
VA < 6/18	83.8	84.6	84.2